

# Bureau of Land Management

## Amarillo Field Office

### Helium Operations



### Statistical Report for May - 2013



#### *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

#### *List of Tables*

Table 1 - Summary of Helium Operations  
Table 2 - Bush Dome Reservoir Operations  
Table 3 - Gas Volumes & Inventory  
Table 4 - In Kind Helium Sales  
Table 5 - Conservation Crude Sales/Reserve Sell-down  
Table 5 - Natural Gas/Liquid Sales  
Table 6 - Helium Resources Evaluation  
Table 7 - Helium Storage Contract Activity  
Table 8 - Compression & CHEU (Charges & Operations)

Amarillo, Texas

*Compiled by: David V. Reeves*

Issued: September 5, 2013

**"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: September 5, 2013

Table 1 - Summary of Helium Operations

May - 2013

**Helium Enrichment Unit Operations**

Gas Processed	Month			Gross FYTD	Net FYTD
	Gross Volume	Net Helium	Average Percent		
Measured Plant Feed (Mcf*)	615,453	157,562	25.60%	5,254,832	1,342,085
Helium Product (Mcf*)	197,916	154,344	77.98%	1,692,768	1,322,420
Residue Natural Gas (Mcf*)	277,462	0	00.00%	2,370,145	0

\* Volumes in Mcf at 14.65 psia & 60°F

**Natural Gas & Liquids Produced**

Gas Processed	Month	FYTD
Natural Gas Sales (Mcf***)	273,739	2,330,955
NGL Sales (gallons)	107,485	897,033

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

**Bush Dome Reservoir Operations**

Conservation gases from all sources	Month			Gross FYTD	Net FYTD
	Gross Volume	Net Helium	Average Percent		
Total Withdrawn (Mcf*)	612,729	154,727	25.25%	5,254,323	1,328,669
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	1,050,000	525,000	17,213,600
Conservation Crude Sale Volume Transferred (Mcf*)	0	0	1,575,000	1,050,000	17,213,600
Conservation Helium in Storage (EOM) (Mcf*)		9,762,360			

\* Volumes in Mcf at 14.65 psia & 60°F

**In Kind Helium**

	Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)	14,920	93,948	46,992	2,964,075
Sale Volumes Outstanding (Mcf*)	20,530			

\* Volumes in Mcf at 14.65 psia & 60°F

**Private Company Helium Storage Contracts**

Contact Activity	Month			Annual Helium FYTD
	Gross Volume	Net Helium	Average Percent	
Crude Acquired (Mcf*)	54,011	35,288	65.33%	273,557
Crude Disposed (Mcf*)	251,537	190,153	75.60%	1,580,472
Net Balance (Mcf*)	(197,526)	(154,865)		(1,306,915)
Balance of Stored Helium End Of Month (Mcf*)		1,638,949		

\* Volumes in Mcf at 14.65 psia & 60°F

**Revenue / Charges**

Helium Storage Contracts (Charges Billed (\$))	Month	FYTD
Storage Fees Billed (\$)	\$293,317	\$2,091,302
Reservoir Management Fees Billed (\$)	\$200,280	\$1,737,572

**Field Compressor Charges (Charges Billed (\$))**

	Month	FYTD
Funded by the Refiners (provides for booster compression services)	(\$55,778)	(\$446,222)
Cliffside Refiners, LP, by Agreement #GDA010003 (reimburses BLM for fuel, labor, supplies, etc.)	\$12,540	\$100,322
Net-Total (Funded by the Refiners for compression costs.)	(\$43,238)	(\$345,900)

**Enrichment Unit Charges (Charges Billed (\$))**

	Month	FYTD
Reservoir Management Fees (RMF)	\$200,280	\$1,737,572
Total operating costs	(\$824,449)	(\$6,481,640)
Sub Total - Items provided by BLM	\$330,764	\$2,532,157
Total - Cliffside Refiners, LP, GDA030001	(\$493,685)	(\$3,949,483)

**Conservation Helium - Natural Gas - Liquid Sales**

(Charges Billed (\$))	Month	FYTD
Conservation Crude Helium Sales	\$0	\$88,200,000
In Kind Sales	\$0	\$4,466,294
Natural Gas & Liquid Sales	\$1,241,863	\$9,494,876

**Helium Resources Evaluation**

	Month	FYTD
Revenue Collected from Federal Lease Holds	\$1,106,943	\$8,429,067
Helium Sample Collection Report for month	Submitted - 0	Received - 0
		Analyzed - 23

\*Rounded to nearest dollar

Table 2 - Bush Dome Reservoir Operations

May - 2013

		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
<b>TOTAL</b>		<b>612,729</b>	<b>207,686,337</b>	<b>154,727</b>	<b>38,754,623</b>	<b>154,052</b>	<b>51,118,121</b>	<b>269,451</b>	<b>105,486,965</b>	<b>29,210</b>	<b>10,601,856</b>	<b>5,288</b>	<b>1,724,772</b>
BIVINS A-3	May-13	14,916	10,929,061	7,214	3,534,009	3,779	2,764,049	3,436	4,151,190	386	406,378	101	73,435
BIVINS A-6	May-13	58,895	10,380,539	35,122	6,185,556	14,967	2,546,980	7,601	1,458,763	775	143,609	430	45,631
BIVINS A-13	May-13	53,802	7,180,312	20,053	3,994,599	13,593	1,852,798	17,703	1,166,897	2,051	126,905	403	39,114
BIVINS A-14	May-13	69,630	7,950,051	28,655	4,924,000	17,592	2,018,957	20,512	872,883	2,293	91,954	578	42,257
BIVINS A-4	May-13	37,197	12,400,952	6,093	2,250,092	8,992	3,006,482	19,656	6,396,049	2,089	639,441	368	108,888
BUSH A-2	May-13	49,600	11,709,232	6,817	1,787,486	12,422	2,863,549	27,004	6,317,968	3,008	640,349	348	99,880
Injection	May-13	0	66,240,889	0	47,846,276	0	17,067,782	0	775,688	0	23	0	551,121
inj Bivins A-3	May-13	0	(25,652,315)	0	(18,384,452)	0	(6,554,549)	0	(332,777)	0	0	0	(380,537)
inj Bivins A-6	May-13	0	(24,201,365)	0	(17,514,139)	0	(6,437,517)	0	(138,222)	0	(12)	0	(111,475)
inj Bivins A-13	May-13	0	(6,490,417)	0	(4,706,191)	0	(1,656,853)	0	(122,391)	0	(2)	0	(4,980)
inj Bivins A-14	May-13	0	(6,501,333)	0	(4,767,421)	0	(1,602,106)	0	(126,303)	0	(7)	0	(5,497)
inj Bivins A-4	May-13	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	May-13	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	May-13	0	1,217,868	0	897,578	0	261,663	0	47,122	0	3,172	0	8,333
BIVINS A-1	May-13	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	May-13	16,075	13,389,050	718	1,859,208	3,763	3,286,257	10,348	7,398,457	1,091	734,806	155	110,323
BIVINS A-5	May-13	34,204	15,211,766	6,575	1,893,522	8,684	3,722,136	16,840	8,602,224	1,842	861,554	263	132,331
BIVINS A-7	May-13	26,123	11,184,049	8,323	2,589,711	6,777	2,811,708	9,749	5,176,140	1,101	524,879	173	81,611
BIVINS A-9	May-13	15,863	9,668,474	333	182,390	4,108	2,369,634	10,210	6,384,474	1,084	643,030	127	88,946
BIVINS A-11	May-13	27,430	5,822,413	781	120,820	7,031	1,444,009	17,503	3,812,337	1,859	390,380	255	54,868
BIVINS A-15	May-13	27,406	8,770,127	480	412,253	6,476	2,091,782	18,253	5,616,086	1,873	560,935	324	89,071
BIVINS B-1	May-13	27,432	6,979,984	702	275,360	6,696	1,690,417	17,872	4,488,973	1,864	456,465	299	68,769
BIVINS B-2	May-13	32,550	5,737,278	620	107,938	8,329	1,433,121	20,863	3,735,186	2,194	383,284	543	77,749
BUSH A-1	May-13	0	5,721,962	0	104,140	0	1,356,677	0	3,830,281	0	374,216	0	56,647
BUSH A-3	May-13	37,588	11,171,930	14,072	2,538,065	9,565	2,756,100	12,263	5,251,223	1,377	528,509	311	98,034
BUSH A-4	May-13	18,600	8,073,134	2,733	1,513,545	4,744	2,016,388	9,937	4,070,822	1,077	413,515	109	58,864
BUSH A-5	May-13	49,898	15,272,056	15,126	3,439,961	12,702	3,828,200	19,589	7,171,342	2,188	725,050	293	107,503
BUSH A-8	May-13	10,799	3,728,752	200	68,383	2,688	899,429	7,015	2,467,674	728	248,264	167	45,002
BUSH A-9	May-13	607	3,858,977	31	104,937	149	930,439	380	2,535,973	41	253,331	5	34,296
BUSH A-11	May-13	179	4,270,379	4	126,407	43	1,021,317	117	2,791,095	12	283,110	2	48,451
BUSH B-1	May-13	3,935	3,199,202	72	60,085	952	758,910	2,601	2,138,570	277	210,285	33	31,352
FUQUA A-1	May-13	0	2,954,094	0	53,854	0	702,797	0	1,975,172	0	193,572	0	28,699
FUQUA A-2	May-13	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	May-13	0	9,303,833	0	577,004	0	2,277,668	0	5,790,310	0	583,696	0	75,155
TT Fuel	May-13	0	0	0	0	0	0	0	0	0	0	0	0
field-wide pcts				25.25%	18.66%	25.14%	24.61%	43.98%	50.79%	4.77%	5.10%	0.86%	0.83%

Latest estimates of reserves and feed to HEU

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

As of EOM	May-13	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 - 12		72.131	19.611
Injection 2003 - 12		(1.189)	(0.985)
Produced to Date 2013		3.176	0.796
Injected to Date 2013		0.000	0.000
Amount of Raw Gas Available to CHEU		106.446	=====> 13.832 total helium in reservoir
Estimated Bottom Hole Pressure		391.949	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

May - 2013

#### 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	May-13	615,453	72,844,410	157,562	18,764,010	153,986	18,280,745	269,844	31,797,630	28,773	3,387,067	5,287	614,957
Calculated Feed	May-13	612,121	72,501,985	154,696	18,747,339	153,903	18,193,991	269,070	31,566,306	29,169	3,380,989	5,283	613,361
Feed to Box	May-13	608,286	72,072,133	154,696	18,747,517	153,903	18,194,073	269,070	31,566,352	29,169	3,380,996	1,448	183,196
Cheu Product	May-13	197,916	23,562,968	154,344	18,521,186	38,489	4,419,316	3,665	457,757	1	401	1,418	164,308
Residue	May-13	277,462	31,889,784	0	1,477	6,572	797,901	247,189	28,283,597	23,701	2,805,570	0	1,238
Cold Box Vent	May-13	100,607	12,356,913	71	86,369	92,236	10,944,098	8,284	1,265,593	0	135	16	60,717
Flare/Boot Strap	May-13	100,607	2,873,161	71	47,148	92,236	2,199,100	8,284	527,762	0	93,600	16	5,551
Fuel From Cheu	May-13	7,419	976,277	2	247	215	29,556	6,040	792,986	1,162	153,488	0	0
Shrinkage/Loss	May-13	4,305	314,537	0	0	0	0	0	0	4,305	314,537	0	0
Unaccounted*	May-13	20,576	2,013,002	280	83,515	16,391	1,635,692	3,892	290,119	0	1,085	13	2,592

\*Before October 2004, the values are estimated

#### Storage Operations

Inventory (contained helium)	Government		Private		Crude Helium Pipeline	Gross			Net Helium			Percent		
Beginning inventory	9,776,688	1,778,894			Beginning inventory	37,785	28,367	75.07%						
net acceptances + redeliveries	0	0			Measured to Pipeline (Private Plants)	54,011	35,490	65.71%						
In Kind Transfers	(14,920)	14,920			Measured from Pipeline (Private Plant)	251,537	190,153	75.60%						
Conservation Crude Sales	0	0			HEU Production	197,916	154,344	77.98%						
Gain/loss	592				Injection	0	0	00.00%						
Ending Inventory	9,762,360	1,638,949			Production	0	0							
Total Helium in Reservoir	13,832,065				Ending Inventory	37,946	28,639	75.47%						
Total Helium in Storage	11,401,309				Gain/Loss	(230)	592							
Helium in native gas	2,430,756													

#### 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

May - 2013

	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$)**	
<b>In Kind Helium</b>										
<b>AirGas South West, Contract no. INC98-0101</b>									(billed quarterly)	
Month										
FYTD										
<b>AirGas North Central, Contract no. INC98-0102</b>										
Month										
FYTD										
<b>AirGas Intermountain, Contract no. INC98-0103</b>										
Month										
FYTD										
<b>Air Liquide Helium America, Inc., Contract no. INC98-0104</b>										
Month										
FYTD										
<b>Air Products, L.P., Contract no. INC98-0105</b>										
Month										
FYTD										
<b>Linde Gas North America, LLC, Contract no. INC98-0106</b>										
Month										
FYTD										
<b>Corp Brothers, Inc., Contract no. INC98-0107</b>										
Month										
FYTD										
<b>FIBA Technologies, Inc., Contract no. INC98-0108</b>										
Month										
FYTD										
<b>General Air Service &amp; Supply Co., Contract no. INC98-0109</b>										
Month										
FYTD										
<b>Jack B. Kelley Co., Contract no. INC98-0110</b>										
Month										
FYTD										
<b>Portland Welding Supply, Contract no. INC98-0111</b>										
Month										
FYTD										
<b>Praxair, Inc., Contract no. INC98-0112</b>										
Month										
FYTD										
<b>United States Welding, Inc., Contract no. INC98-0113</b>										
Month										
FYTD										
<b>Matheson Tri-Gas, Inc., Contract no. INC98-0114</b>										
Month										
FYTD										
<b>GT &amp; S, Contract no. INC00-0115</b>										
Month										
FYTD										
<b>Total month</b>	0	0	0	0	0	0	0	0	\$0	
<b>Total FYTD</b>	21,772	4,066	37	44	10,059	32,120	68,097	67,047	\$4,466,294	
<b>Total CYTD</b>	9,251	1,922	21	19	5,292	17,515	34,019	33,493	\$2,268,507	
<b>Cumulative</b>	1,705,985	99,374	366	271,530	407,474	546,779	3,031,507	2,984,530	\$165,937,986	
<b>In Kind Transfers</b>							Month	FYTD	CYTD	Cumulative
Transferred							14,920	93,948	46,992	2,964,075
Volume outstanding							20,530			

\* 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

May - 2013

Helium & Natural Gas Sales

	Award Volume*	Outstanding*	Sales*	Charges Billed (\$)*** (billed quarterly)	
<b>Conservation Helium</b>					
<b><u>Air Liquide Helium America, Inc.</u></b>					
Month	0	0	0	\$0	
FYTD	6,300	0	6,300	\$529,200	
Cumulative	270,550		270,550	\$18,831,450	
<b><u>Air Products, L.P.</u></b>					
Month	0	0	0	\$0	
FYTD	555,030	185,535	369,495	\$31,037,580	
Cumulative	6,865,435		6,679,900	\$430,015,459	
<b><u>Linde Gas North America, LLC</u></b>					
Month	0	0	0	\$0	
FYTD	406,980	136,185	270,795	\$22,746,780	
Cumulative	5,331,100		5,194,915	\$323,911,308	
<b><u>Keyes Helium Co., LLC</u></b>					
Month	0	0	0	\$0	
FYTD	81,270	27,615	53,655	\$4,507,020	
Cumulative	864,700		837,085	\$52,636,843	
<b><u>Matheson Tri-Gas, Inc.</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	10,000		10,000	\$587,500	
<b><u>Praxair, Inc.</u></b>					
Month	0	0	0	\$0	
FYTD	525,420	175,665	349,755	\$29,379,420	
Cumulative	4,196,815		4,021,150	\$266,435,091	
<b><u>Linde Gas, LLC discontinued 10 2008</u></b>					
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	200,000		200,000	\$11,035,000	
<b>Total month</b>	0	0	0	<b>\$0</b>	
<b>Total FYTD</b>	1,575,000	525,000	1,050,000	<b>\$88,200,000</b>	
<b>Total CYTD</b>	1,050,000		525,000	<b>\$44,100,000</b>	
<b>Cumulative</b>	17,738,600		17,213,600	<b>\$1,103,452,650</b>	
<b>Conservation Crude Transfers</b>					
Transferred		Month	FYTD	CYTD	Cumulative
Volume outstanding		0	1,575,000	1,050,000	17,213,600

\* Volumes in Mcf at 14.65 psia & 60°F

Natural Gas/Liquid Sales

	Natural Gas (Mcf)***	NGLs (gal)	Decatherms	Avg Btu Value	Charges Billed (\$)*** (billed monthly)
<b><u>El Paso Natural Gas</u></b>					
Provides Measured Firm/Interruptible Transportation Services					
Month	273,739	---	300,133	1,096	(\$27,997)
FYTD	2,330,955	---	2,554,981	1,096	(\$228,122)
Cumulative	31,269,997	---	34,351,282	1,099	(\$3,462,610)
<b><u>Minerals Management Service</u></b>					
No Longer Provides Natural Gas Marketing Services					
Cumulative	---	---	---	---	(\$179,913)
<b><u>Tenaska</u></b>					
Purchaser - Natural Gas					
Month	---	---	301,600	\$3.765539	\$1,135,687
FYTD	---	---	2,510,083	\$3.378967	\$8,481,487
Cumulative	---	---	34,095,496	\$4.954505	\$168,099,764
<b><u>Sandstone</u></b>					
Purchaser - Natural Gas Liquids					
Month	---	107,485	11,464	\$11.703870	\$134,173
FYTD	---	897,033	95,216	\$13.038889	\$1,241,511
Cumulative	---	9,173,983	978,350	\$12.392254	\$12,123,961
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)	Total (\$\$)
<b>Total month</b>	273,739	107,485	313,064	\$3.966801	<b>\$1,241,863</b>
<b>Total FYTD</b>	2,330,955	897,033	2,605,299	\$3.644448	<b>\$9,494,876</b>
<b>Total CYTD</b>	1,403,294	556,105	1,577,968	\$3.785331	<b>\$5,973,132</b>
<b>Cumulative</b>	31,269,997	9,173,983	35,073,846	\$5.058121	<b>\$176,581,202</b>

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

\*\*Rounded to nearest dollar

## Table 6 - Helium Resources Evaluation

May - 2013

All Volumes in Mcf at 14.7 psia & 70°F

<b>Revenue Collected From Federal Leaseholds</b>	Month*	FYTD*
Fee Sales & Royalties	\$1,106,353	\$8,393,981
Natural Gas Royalties (1)	\$0	\$6,280
Natural Gas Rentals	\$0	\$0
Other	\$28,805	\$253,829
Revenue Collected from Federal Lease Holds	\$1,106,943	\$8,429,067

\*Totals do not sum

<b>Helium Analysis and Evaluation</b>	Month	FYTD
Number of Sample Request Letters Sent	0	0
Number of Samples Received	0	0
Number of Samples Analyzed	8	80
Total Number of Samples Analyzed For Resources Division	8	93
Total Number of Other Samples Analyzed (2)	23	167

### U. S. Helium Production

<i>Domestic</i>	FY Volume	CY Volume
2007 Helium Sold	4,995,600	4,965,176
2008 Helium Sold	4,771,200	4,668,286
2009 Helium Sold	4,325,600	4,238,415
2010 Helium Sold	4,559,100	4,644,278
2011 Helium Sold	4,604,000	4,692,233
Estimated Helium Resources as of 12/31/2006(Mcf)		732,000,000

	FY-2010	CY-2010
<b>U.S. Helium Exports</b> (3)	2,663,848	2,767,536

(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

May - 2013

All Volumes in Mcf at 14.65 psia & 60°F

	Metered Gas						Transferred Gas Helium		Stored Helium EOM	Charges Billed (\$)**	
	Gross Gas	Helium %	Helium	Helium			Month	Cumulative		Month	FYTD
				FYTD	CYTD	Cumulative					
<b>Total All Contracts*</b>											
Crude Acquired	54,011	65.3%	35,288	273,557	165,524	30,552,554	59,947	50,379,707			
Crude Disposed	251,537	75.6%	190,153	1,580,472	952,240	46,970,149	45,027	30,844,445			\$293,317 Storage Fees
Grade-A Rdlvrd	0		0	0	0	1,478,718					<u>\$200,280</u> RMF Fees
Net/Balance	(197,526)		(154,865)	(1,306,915)	(786,716)	(17,896,313)	14,920	19,535,262	1,638,949		\$493,596 \$3,828,874
<b>Total Prior Contracts (TERMINATED)</b>											
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		
<b>Linde Gas North America, LLC, Contract no. 1995-3249</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Praxair, Inc., Contract no. 1995-3251</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Air Products, L.P., Contract no. 1995-3256</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>ExxonMobil Gas Marketing Co., Contract no. 1995-3280</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Pioneer Natural Resources USA, Inc, Contract no. 1995-3286</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Keyes Helium Co., LLC, Contract no. 1995-3287</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Air Liquide Helium America, Inc., Contract no. 2003-3284</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Matheson Tri-Gas, Inc., Contract no. 2007-3288</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Airgas Merchant Gases, Contract no. 2009-3290</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Global Gases America, Contract no. 2013-3293</b>											
Crude Acquired	0	---	0	0	0	0	0	0			\$0 Storage Fees
Crude Disposed	0	---	0	0	0	0	0	0	0.0%		<u>\$0</u> RMF Fees
Net/Balance	0		0	0	0	0	0	0	0		\$0 \$7,000

<b>Government Helium</b>	
Remaining Crude Acquired beginning of the month	9,776,688
Crude Disposed: In Kind Sales transferred for the month	(14,920)
Conservation Crude Sales/Reserve Sell Down transferred (mon)	0
Gains and Losses for the month	592
Net/Balance of Purchased Helium Remaining for Sale	9,762,360

\*Includes In Kind and Conservation Crude transfers from Government storage

\*\*Rounded to nearest dollar

# Table 8 - Compression & CHEU (Charges & Operations)

May - 2013

## Field/CHEU Compressor Operations

		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	\$3.77	\$4.44	\$5.19
Fuel used * (now includes field compression well head)	total MMBTU	11,175	95,401	1,368,935
Field Compression Fuel Cost *	\$dollars	\$0	\$0	\$654,398
CHEU Compression Fuel Cost *	\$dollars	\$19,461	\$147,719	\$3,706,474
CHEU Process Fuel Cost *	\$dollars	\$12,871	\$98,902	\$2,488,902
Rental compressor(s) fuel consumed (well head)	\$dollars	\$9,798	\$75,913	\$95,006
Rental Compressor(s) helium in fuel (Mcf x \$\$)	\$dollars	\$11,088	\$100,968	\$158,494
Rental compressor(s) helium in fuel (Mcf)	Mcf	132	1202	1962
#1 Compressor run time *	hours	744	5,451	80,228
#2 Compressor run time *	hours	174	1,992	51,280
#3 Compressor run time *	hours	571	4,160	43,894

\* Field/CHEU Compressor Operations based on May 13 activity

## Field Compressor Charges

	Charges Billed (\$)*		
	Month	FYTD	Cumulative
Linde Gas North America, LLC, Contract no. 1995-3249			
Praxair, Inc., Contract no. 1995-3251			
Air Products, L.P., Contract no. 1995-3256			
Keyes Helium Co., LLC, Contract no. 1995-3287			
SubTotal - Cliffside Refiners, LP (provides booster compression services)	(\$55,778)	(\$446,222)	(\$9,573,183)
Cliffside Refiners, LP, GDA010003 (BLM provided fuel *, labor, supplies, etc.)	\$12,540	\$100,322	\$2,386,662
Net Total - Cliffside Refiners, LP	(\$43,238)	(\$345,900)	(\$7,186,520)

\* BLM provided fuel cost is based on Apr 13 fuel consumed

**\*Rounded to nearest dollar**

## Crude Helium Enrichment Unit (CHEU)

CHEU Runtime	Month		FYTD		Cumulative
	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs
Processing feed gas	744	100.0%	5,816	99.7%	84,442
Producing residue gas	744	100.0%	5,796	99.4%	83,525
Producing helium product	744	100.0%	5,772	99.0%	80,593
Producing natural gas liquids	744	100.0%	5,789	99.3%	79,114

## CHEU Charges

	Charges Billed (\$)*		
	Month	FYTD	Cumulative
Reservoir Management Fees (RMF)	\$200,280	\$1,737,572	\$24,572,844
Total operating costs	(\$824,449)	(\$6,481,640)	(\$103,710,249)
Labor	\$91,255	\$730,041	\$9,886,302
Compressor fuel cost Apr 13	\$22,892	\$142,648	\$3,737,829
HEU fuel cost Apr 13	\$14,160	\$94,813	\$2,520,858
Electrical power cost Apr 13	\$120,115	\$905,813	\$15,475,328
Other	\$82,342	\$658,841	\$10,220,176
Sub Total - Items provided by BLM	\$330,764	\$2,532,157	\$45,049,849
Total - Cliffside Refiners, LP, GDA030001	(\$493,685)	(\$3,949,483)	(\$58,660,400)

**\*Rounded to nearest dollar**

## CHEU Utility Usage

	Month	FYTD	Cumulative
Cheu Fuel Gas (Mcf) usage May 13	2,953	25,290	432,013
Cheu Pure Water Usage (gallons) May 13	873	8,628	266,220
Electricity Metered (Kwh) consumed Apr 13	2,752,420	22,671,457	22,671,457