

# Bureau of Land Management

## Amarillo Field Office Helium Operations



### Statistical Report for April - 2004



#### *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  
-Natural Gas Engineering

#### *List of Tables*

Table 1 - Summary of Helium Operations  
\* **Table 2 - In Kind Helium Sales**  
Table 2.1 - Open Market/Reserve Sell-down  
Helium & Natural Gas Sales  
Table 3 - Helium Resources Evaluation  
\* **Table 4 - Federal Acquisition & Storage Operations**  
\* **Table 4.1 - Helium Storage Contract Activity**  
Table 5 - Pipeline & Cliffside Field Operations  
Table 6 - Helium Enrichment Unit Operations

Amarillo, Texas

Issued: August 3, 2004

**\*Tables include COMPANY PROPRIETARY INFORMATION (shaded) and is for internal use only.  
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Approved for distribution: *Nelson R. Bullard*

Date: *08/03/2004*

Table 1 - Summary of Helium Operations

April - 2004

In Kind Sales		NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind	Charges Billed (\$)**	
Total month		0	0	0	0	0	0	0	0	\$0	
Total FYTD		46,859	3,270	0	13,999	14,267	24,553	102,948	101,355	\$5,396,667	
Total CYTD		19,253	1,743	0	4,675	10,125	15,454	51,250	50,457	\$2,724,845	
In Kind Transfers								Month	FYTD	CYTD	Cumulative
Transferred								0	97,343	50,781	1,257,281
Volume outstanding								50,574			
Open Market Sales				Award Volume		Outstanding		Sales	Charges Billed (\$)**		
Total month				0		0		0	\$0		
Total FYTD				675,600		337,800		337,800	\$18,241,200		
Total CYTD				0				318,900	\$17,220,600		
Open Market Transfers								Month	FYTD	CYTD	Cumulative
Transferred								0	747,800	337,800	1,977,800
Volume outstanding								0			
Natural Gas/Liquids Sales		Natural Gas (Mcf)		NGLs (gal)		Decatherms		\$/unit	Charges Billed (\$)**		
Total month		298,632		70,221		313,526		\$5.1554	\$1,601,722		
Total FYTD		1,582,853		322,430		1,768,912		\$4.9489	\$8,697,383		
Total CYTD		1,089,041		273,220		1,195,182		\$5.1233	\$6,080,007		
Purchased Helium	Month			Month	FYTD	Month	FYTD	FYTD	CYTD	Cumulative	
	Helium Mixture	Helium Percent	Helium	Low Purity Helium		Below 50% Helium		Contained Helium			
Total purchased										32,176,145	
Helium transferred			0					845,143	388,581	5,220,421	
Purchased helium in storage										26,955,724	
Private Plant Activity											
Accepted in storage system	96,524	65.3%	62,994	1,169	9,181	(357)	(1,498)	449,604	251,159	8,253,831	
Redelivered from storage system	(244,590)	71.7%	(175,352)	0	0	280	300	(1,091,026)	(616,250)	(12,703,404)	
Total apparent crude produced^	184,909	69.6%	128,752					953,804	540,049	8,131,045	
Total apparent crude refined^	(333,088)	72.4%	(241,190)					(1,596,174)	(906,087)	(13,136,529)	
Storage Contract Activity	Metered Gas					Transferred Gas		Stored	Charges Billed (\$)**		
	Gross Gas	Helium	Helium	Helium	Helium	Helium	Helium	Helium	Month	FYTD	
	Month	FYTD	CYTD	Cumulative	Month	Cumulative	EOM	Month	FYTD		
Crude Acquired	95,817	62,637	448,106	250,505	25,623,114	51,548	28,413,013				
Crude Disposed	244,590	175,072	1,090,726	615,955	24,528,484	51,548	25,820,345		\$331,577	Storage Fees	
Grade-A Rdlvrd	0	0	0	0	1,478,718	0	0		\$88,563	RMF Fees	
Net/Balance	(148,773)	(112,435)	(642,620)	(365,450)	(384,088)	0	2,592,668	2,208,580	\$420,139	\$2,519,966	
Bush Dome Reservoir Operations											
Conservation gases from all sources											
		Month		Fiscal Year		Since Start of Conservation Program		Since Field Discovery			
		Gross	Net	Gross	Net	Gross	Net	Gross	Net		
In underground storage, beg. of period		40,724,275	29,345,900	41,328,824	29,775,145	490,620	490,620	0	0		
Net Activity		(45,444)	(32,033)	(649,993)	(461,278)	40,188,210	28,823,247	40,678,830	29,313,867		
Total in underground storage		40,678,830	29,313,867	40,678,830	29,313,867	40,678,830	29,313,867	40,678,830	29,313,867		
Native Gas											
Total in place, beg. of period		204,068,649		206,235,982		265,724,755		318,727,000			
Net Activity		(559,677)		(2,727,010)		(62,215,783)		(115,218,028)			
Total in place, end of month		203,508,972		203,508,972		203,508,972		203,508,972			
Native Gas plus Conservation Gases											
Total gases in place, beg. of period		244,792,924		247,564,806		266,215,375		318,727,000			
Net Activity		(605,121)		(3,377,003)		(22,027,573)		(74,539,198)			
Total gases in place, end of month		244,187,802		244,187,802		244,187,802		244,187,802			
Helium Resources Evaluation					Month	FYTD					
Revenue Collected from Federal Lease Holds					\$640,181	\$4,646,229					
Helium Sample Collection Report for month					Submitted 12	Received 6	Analyzed 90				
Helium Enrichment Unit Operations											
Gas Processed	Month			FYTD			Cumulative				
	Helium-Gas Mixture	Helium Percent	Helium	Helium-Gas Mixture	Helium Percent	Helium	Helium-Gas Mixture	Helium Percent	Helium		
Plant feed	603,056	20.5%	123,563	3,192,533	18.6%	593,969	5,954,246	15.9%	946,833		
Helium product	154,467	77.8%	120,226	742,536	77.3%	574,124	1,168,753	76.7%	896,644		
Residue natural gas	305,376	0.0%	7	1,563,526	0.0%	403	3,093,170	0.0%	414		
Vent, flare & plant losses	137,963	2.5%	3,443	888,723	2.2%	19,554	2,014,470	2.5%	49,888		
Helium recovery efficiency			97.3%			96.7%			94.7%		

\* Volumes in Mcf at 14.7 psia & 70°F; all other volumes in 14.65 psia & 60°F

\*\*Rounded to nearest dollar

^ Other sources of helium are accessed but data are not available

Table 2 - In Kind Helium Sales

April - 2004

	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges Billed (\$)**	
<b>In Kind Helium</b>										
<b>Aeriform, Contract no. INC98-0101</b> (billed quarterly)										
Month										
FYTD										
<b>AGA Gas, Inc., Contract no. INC98-0102</b>										
Month										
FYTD										
<b>AirGas, Inc., Contract no. INC98-0103</b>										
Month										
FYTD										
<b>Air Liquide America, L.P., Contract no. INC98-0104</b>										
Month										
FYTD										
<b>Air Products, L.P., Contract no. INC98-0105</b>										
Month										
FYTD										
<b>BOC Gases, 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>Tri-Gas, Inc., Contract no. INC98-0114</b>										
Month										
FYTD										
<b>Messer Griesheim Ind., Contract no. INC00-0115</b>										
Month										
FYTD										
<b>Total month</b>	0	0	0	0	0	0	0	0	\$0	
<b>Total FYTD</b>	46,859	3,270	0	13,999	14,267	24,553	102,948	101,355	\$5,396,667	
<b>Total CYTD</b>	19,253	1,743	0	4,675	10,125	15,454	51,250	50,457	\$2,724,845	
<b>Cumulative</b>	751,840	21,672	58	182,518	195,702	176,629	1,328,421	1,307,780	\$65,632,922	
<b>In Kind Transfers</b>							Month	FYTD	CYTD	Cumulative
Transferred							0	97,343	50,781	1,257,281
Volume outstanding							50,574			

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

\*\*Rounded to nearest dollar

COMPANY PROPRIETARY INFORMATION

Table 2.1 - Open Market/Reserve Sell-down  
Helium & Natural Gas Sales

April - 2004

	Award Volume*	Outstanding*	Sales*	Charges Billed (\$)**
<b>Conservation Helium</b>				
<b>Air Liquide America, L.P.</b> (billed quarterly)				
Month	0	0	0	\$0
FYTD	0	0	0	\$0
Cumulative	50,000		50,000	\$2,625,000
<b>Air Products, L.P.</b>				
Month	0	0	0	\$0
FYTD	0	0	0	\$0
Cumulative	680,400		680,400	\$35,721,000
<b>BOC Gases</b>				
Month	0	0	0	\$0
FYTD	550,000	275,000	275,000	\$14,850,000
Cumulative	1,384,000		1,109,000	\$58,635,000
<b>Keyes Helium Co.</b>				
Month	0	0	0	\$0
FYTD	75,600	37,800	37,800	\$2,041,200
Cumulative	151,200		113,400	\$6,010,200
<b>AGA Gas, Inc.</b>				
Month	0	0	0	\$0
FYTD	50,000	25,000	25,000	\$1,350,000
Cumulative	50,000		25,000	\$1,350,000
<b>Total month</b>	0	0	0	\$0
<b>Total FYTD</b>	675,600	337,800	337,800	\$18,241,200
<b>Total CYTD</b>	0		318,900	\$17,220,600
<b>Cumulative</b>	2,315,600		1,977,800	\$104,341,200

**Open Market Transfers**

	Month	FYTD	CYTD	Cumulative
Transferred	0	747,800	337,800	1,977,800
Volume outstanding	0			

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

	Natural Gas (Mcf)***	NGLs (gal)	Decatherms	\$/unit	Charges Billed (\$)**
<b>Natural Gas/Liquids Sales</b>					
<b>El Paso Natural Gas</b> Provides Firm/Interruptible natural gas transportation services (billed monthly)					
Month	297,010		328,495	(\$0.0836)	(\$27,460)
FYTD	1,538,704		1,700,733	(\$0.1130)	(\$192,221)
Cumulative	2,730,125		3,023,081	(\$0.1181)	(\$356,982)
<b>Minerals Management Service</b> Provides natural gas marketing services under a Cooperative Agreement					
Month				\$0.0000	\$0
FYTD				\$0.0000	\$0
Cumulative				(\$0.0046)	(\$12,448)
<b>Cenergy Marketing</b>					
Month	297,010	0	305,914	\$5.194773	\$1,574,510
FYTD	1,574,256	0	1,734,787	\$5.028244	\$8,666,196
Cumulative	2,810,255	0	3,011,661	\$5.021234	\$15,035,484
<b>Seminole Transportation &amp; Gathering</b>					
Month	0	70,221	7,612	\$7.182275	\$54,671
FYTD	0	322,430	34,125	\$6.546755	\$223,408
Cumulative	0	322,430	34,125	\$6.546755	\$223,408
<b>Total month</b>	297,010	70,221	313,526	\$5.155442	\$1,601,722
<b>Total FYTD</b>	1,574,256	322,430	1,768,912	\$4.948872	\$8,697,383
<b>Total CYTD</b>	1,083,126	273,220	1,195,182	\$5.123314	\$6,080,007
<b>Cumulative</b>	2,810,255	322,430	3,045,786	\$4.917034	\$14,889,462

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

\*\*Rounded to nearest dollar

## Table 3 - Helium Resources Evaluation

April - 2004

All Volumes in Mcf at 14.7 psia & 70°F

### Revenue Collected From Federal Leaseholds

	Month*	FYTD*
Fee Sales & Royalties	\$636,342	\$4,619,180
Natural Gas Royalties (1)	\$3,326	\$22,280
Natural Gas Rentals	\$0	\$0
Other	\$4,699	\$30,739
Revenue Collected from Federal Lease Holds	\$640,181	\$4,646,229

\*Totals do not sum

### Helium Analysis and Evaluation

	Month	FYTD
Number of Sample Request Letters Sent	12	43
Number of Samples Received	6	15
Number of Samples Analyzed	9	24
Total Number of Samples Analyzed For Resources Division	9	37
Total Number of Samples Analyzed (2)	90	641

### U. S. Helium Production

<i>Domestic</i>	CY Volumes
1998 Helium Sold	4,029,755
1999 Helium Sold	4,203,019
2000 Helium Sold	4,564,589
2001 Helium Sold	4,756,719
2002 Helium Sold	4,584,904
2003 Helium Sold	4,399,944
2004 Helium Sold (projected)	4,500,000
<b>Estimated Helium Resources (as of 01/01/2003)</b>	<b>305,000,000</b>

	FY-2003	CY-2003
<b>U.S. Helium Exports</b> (3)	1,457,623	1,487,258

(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 4 - Federal Acquisition & Storage Operations

April - 2004

All Volumes in Mcf at 14.65 psia & 60°F

	Month			Month	FYTD	Month	FYTD	FYTD	CYTD	Cumulative
	Helium-Gas Mixture	Helium Percent	Helium	Low Purity Helium		Below 50% Helium		Contained Helium		
<b>Purchased</b>										
Cities Service Helex - Jayhawk		---								6,403,147
National Helium Corp. - Liberal		---								11,561,830
Nothern Helex Co. - Bushton		---								4,475,921
Phillips Petroleum - Dumas		---								5,111,036
Phillips Petroleum - Sherman		---								4,624,211
<i>Total purchased</i>										<b>32,176,145</b>

Purchased helium produced/transferred	0					845,143	388,581	5,220,421
Balance of purchased helium in storage								<b>26,955,724</b>

**Bureau Plants**

Delivery/Handling Credit	0	---	0			0	13,205,259
Withdrawal	0	---	0			0	7,540,255

**Private Plants**

Helium accepted under terminated contracts (pre-FY96)								16,453,073
Helium redelivered under terminated contracts (pre-FY96)								13,007,062

Pioneer - Fain*									
GPM - Dumas*									
Crescendo - Sunray*									
Air Products - Guymon*									
GPM - Sherhan*									
GPM to APG+									
<i>Total GPM - Sherhan</i>									
Keyes Helium - Sturgis* ^									
Keyes Helium - Sturgis* ^									
<i>Total Keyes Helium - Sturgis* ^</i>									
Pioneer - Satanta*									
Williams - Baker*									
National Helium - Liberal*									
National to APL+									
<i>Total National Helium - Liberal</i>									
Air Products - Liberal*									
Praxair - Jayhawk* ^									
Praxair - Jayhawk* ^									
<i>Total Praxair - Jayhawk* ^</i>									
Amoco to Praxair+									
CIG - Lakin*									
BOC Gases - Otis* ^									
KN Processing - Bushton*									
KNP to Praxair+									
<i>Total KN Processing - Bushton</i>									
Praxair - Bushton*									

**Plant Inactive**

Accepted in storage system	96,524	65.3%	62,994	1,169	9,181	(357)	(1,498)	449,604	251,159	8,253,831
Redelivered from storage system	(244,590)	71.7%	(175,352)			280	300	(1,091,026)	(616,250)	(12,703,404)
Total apparent crude produced^	184,909	69.6%	128,752					953,804	540,049	8,131,045
Total apparent crude refined^	(333,088)	72.4%	(241,190)					(1,596,174)	(906,087)	(13,136,529)

\* Denotes CUSTODY TRANSFER activity in to or out of the crude helium pipeline system

+ Denotes activity between private plants that does not enter the crude helium pipeline system

^ Other sources of helium are accessed by helium refiners, but data are not available to BLM

**Acquisition & Storage Summary - Contained Helium**

	Month	FYTD	Cumulative
Total acquisition	62,994	449,604	70,088,308
Total disposition	175,352	1,091,026	42,180,793
Total stored in conservation system	(112,358)	(641,422)	27,907,515

Helium in pipeline system plus apparent losses	(1,406,352)
Helium in underground storage	29,313,867

COMPANY PROPRIETARY INFORMATION

Table 4.1 - Helium Storage Contract Activity

April - 2004

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
	Month			FYTD	CYTD	Cumulative					
<b>Total All Contracts*</b>											
Crude Acquired	95,817	65.4%	62,637	448,106	250,505	25,623,114	51,548	28,413,013			
Crude Disposed	244,590	71.6%	175,072	1,090,726	615,955	24,528,484	51,548	25,820,345		\$331,577	Storage Fees
Grade-A Rdlvrd	0		0	0	0	1,478,718				\$88,563	RMF Fees
Net/Balance	(148,773)		(112,435)	(642,620)	(365,450)	(384,088)	0	2,592,668	2,208,580	\$420,139	\$2,519,966
<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>BOC Gases, Contract no. 1995-3249</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Praxair, Inc., Contract no. 1995-3251</b> months - projected depletion											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Air Products, L.P., Contract no. 1995-3256</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Oneok Field Services, Contract no. 1995-3258</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, Contract no. 1995-3286</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Keys Helium Co., Contract no. 1995-3287</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Messer Griesheim Ind., Contract no. 1998-3283</b> months - projected depletion											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Linde Gas LLC, Contract no. 2001-3282</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Mitsui &amp; Co. (U.S.A.), Inc., Contract no. 2002-3289</b> months - projected depletion											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Air Liquide America, L.P., Contract no. 2003-3284</b>											
Crude Acquired											
Crude Disposed											
Net/Balance											
<b>Government Helium</b>											
Crude Acquired							0	32,176,145			
Crude Disposed: In Kind Sales							0				
Open Market/Reserve Sell down							0	5,220,421			
Net/Balance									26,955,724		

\*Includes In Kind and Open Market transfers from Government storage

\*\*Rounded to nearest dollar

COMPANY PROPRIETARY INFORMATION

Table 5 - Pipeline & Cliffside Field Operations

April - 2004

All Volumes in Mcf at 14.65 psia & 60°F

	Month		Fiscal Year		Since Start of Conservation Program		Since Field Discovery	
	Gross	Net	Gross	Net	Gross	Net	Gross	Net
<b>Conservation Pipeline</b>								
Beginning of period inventory (1)	42,590	31,099	46,638	32,039	0	0		
Measured to pipeline (2)	261,165	191,140	1,711,673	1,221,058	112,587,625	80,403,668		
Measured from pipeline (3)	244,590	175,352	1,557,839	1,091,026	46,763,353	33,286,079		
Measured into Bush Dome (4)	12,996	10,108	143,692	111,048	64,500,699	46,348,584		
Calculated inventory (1+2-3-4)	46,169	36,779	56,780	51,023	1,323,573	769,005		
End of period inventory	46,436	33,717	46,436	33,717	46,436	33,717		
Line gain or (loss)	267	(3,062)	(10,343)	(17,306)	(1,277,137)	(735,287)		
Percent gain (loss) of total measured	0.052%	-0.813%	-0.303%	-0.714%	-0.571%	-0.459%		
<b>Bush Dome Reservoir Operations</b>								
<i>Conservation gases from all sources</i>								
In underground storage, beg. of period	40,724,275	29,345,900	41,328,824	29,775,145	490,620	490,620	0	0
Injected during period to date	12,996	10,108	143,692	111,048	64,496,557	46,345,238	65,104,457	46,953,138
Withdrawn during period to date	58,440	42,141	793,685	572,326	24,354,496	17,568,140	24,471,776	17,685,420
Helium from Exell-Soncy	0	0	0	0	46,149	46,149	46,149	46,149
Total in underground storage	40,678,830	29,313,867	40,678,830	29,313,867	40,678,830	29,313,867	40,678,830	29,313,867
<i>Native Gas</i>								
Total in place, beg. of period	204,068,649		206,235,982		265,724,755		318,727,000	
Recoverable in place, beg. of period	195,017,649		197,184,982		256,673,755		309,676,000	
Production during period to date	559,677		2,727,010		62,215,783		115,218,028	
Total in place, end of month	203,508,972		203,508,972		203,508,972		203,508,972	
Recoverable in place, end of month	194,457,972		194,457,972		194,457,972		194,457,972	
<i>Native Gas plus Conservation Gases</i>								
Total gases in place, beg. of period	244,792,924		247,564,806		266,215,375		318,727,000	
Total gases in place, end of month	244,187,802		244,187,802		244,187,802		244,187,802	
Change during period	(605,121)		(3,377,003)		(22,027,573)		(74,539,198)	
Ave. reservoir pressure, beg. of period								
	625.8		636.3		685.0		814.1	
<b>Tuck Trigg Reservoir Operations</b>								
<i>Native Gas</i>								
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	
Ave. reservoir pressure, beg. of period								
	483.7		483.7				548.0	
<b>Natural Gas Sales - Booster Compressor Operations</b>								
<i>Field/HEU Compressor Operations</i>								
Spot gas fuel price					\$ per/MMBTU	\$5.19	\$4.40	\$4.21
Fuel used					total MMBTU	6,595	45,968	156,800
Field compressor fuel revenue					\$dollars	\$1,229	\$34,448	\$388,887
HEU compressor fuel credit					\$dollars	\$18,666	\$81,262	\$133,358
#1 Compressor run time					hours	189	1382	14,868
#2 Compressor run time					hours	357	2072	7,643
#3 Compressor run time					hours	149	1434	4,873
<i>Field Compressor Charges</i>						Charges Billed (\$)*		
BOC Gases, Contract no. 1995-3249								
Praxair, Inc., Contract no. 1995-3251								
Air Products, L.P., Contract no. 1995-3256								
Keyes Helium Co., Contract no. 1995-3287								
<b>SubTotal - Cliffside Refiners, LP</b> (provides booster compression services)						(55,399)	(431,010)	(3,140,629)
Cliffside Refiners, LP, GDA010003 (BLM provided fuel, labor, supplies, etc.)						\$11,603	\$124,437	\$740,930
<b>Net Total - Cliffside Refiners, LP</b>						(43,796)	(306,573)	(2,399,698)

\*Rounded to nearest dollar

## Table 6 - Helium Enrichment Unit Operations

April - 2004

All Volumes in Mcf at 14.65 psia & 60°F (\*except where noted)

	Month			FYTD			Cumulative		
	Helium-Gas Mixture	Helium Percent	Helium	Helium-Gas Mixture	Helium Percent	Helium	Helium-Gas Mixture	Helium Percent	Helium
<b>Gas Processed</b>									
Plant feed	603,056	20.5%	123,563	3,192,533	18.6%	593,969	5,954,246	15.9%	946,833
Helium product	154,467	77.8%	120,226	742,536	77.3%	574,124	1,168,753	76.7%	896,644
Residue natural gas	305,376	0.0%	7	1,563,526	0.0%	403	3,093,170	0.0%	414
Vent, flare & plant losses	137,963	2.5%	3,443	888,723	2.2%	19,554	2,014,470	2.5%	49,888
Helium recovery efficiency			97.3%			96.7%			94.7%

	Month			FYTD			Cumulative		
	Volume*	KWh	Runtime	Volume*	KWh	Runtime	Volume*	KWh	Runtime
<b>Utility Usage</b>									
Natural gas liquids (*gallons)	77,129			333,148			333,148		
K100 compressor		494,478	707		2,856,832	4,127		7,813,392	8,115
K600 compressor		1,584,411	702		8,343,443	3,756		16,021,922	7,264
K610 compressor			691			3,577			6,513
Dew point control system			684		116,557	3,100		116,557	3,100
Other electrical usage		269,756			1,522,377	5,112		3,818,062	9,952
Fuel gas (*Mcf)	3,308			20,209			40,916		
Water (*gallons)	3,996			25,737			40,027		

### HEU Runtime & Charges

	Month		FYTD		Cumulative	
	Runtime	Percent	Runtime	Percent	Runtime	Percent
<i>Enrichment Unit Runtime</i>						
Processing feed gas	707	98.2%	4,127	80.7%	8,115	81.5%
Producing natural gas liquids	684	95.0%	3,100	60.6%	3,100	31.1%
Producing helium product	691	95.9%	3,577	70.0%	6,513	65.4%
Producing residue gas	702	97.5%	3,756	73.5%	7,264	73.0%

	Charges Billed (\$)*		
	Month	FYTD	Cumulative
<i>Enrichment Unit Charges</i>			
Reservoir Management Fees (RMF)	\$88,563	\$499,810	\$1,071,979
Total operating costs	(\$635,210)	(\$6,258,929)	(\$11,251,025)
Labor	\$32,270	\$249,703	\$699,692
Compressor fuel	\$19,005	\$90,645	\$117,234
HEU fuel	\$20,190	\$97,240	\$154,648
Electric power	\$87,369	\$716,209	\$1,030,891
Other	\$17,250	\$120,750	\$224,250
<b>Sub Total</b> - Items provided by BLM	<u>\$176,083</u>	<u>\$3,045,040</u>	<u>\$5,338,372</u>
<b>Total</b> - Cliffside Refiners, LP, GDA030001	(\$459,127)	(\$3,213,889)	(\$5,912,653)

\*Rounded to nearest dollar