Bureau of Land Management



Amarillo Field Office Helium Operations Statistical Report for

May - 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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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, 3019

Table 1 - Summary of Helium Operations

May - 2019

Helium Enrichment Unit Operations Gas Processed	Month Gross Volume	Month Net Helium	Average Percent	Gross FYTD	Net FYTD
Measured Plant Feed (Mcf*)	348,194	50,028	14.37%	3,753,866	581,133
Helium Product (Mcf*)	65,824	47,557	72.25%	789,774	577,243
Residue Natural Gas (Mcf*)	154,991	0	00.00%	1,947,759	0
* Volumes in Mcf at 14.65 psia & 60°F					
Natural Gas & Liquids Produced					
Gas Processed				Month	FYTD
Natural Gas Sales (Mcf***)				154,179	1,931,600
NGL Sales (gallons)				67,859	724,097
*** Volumes in Mcf at 14.73 psia & 60°F				07,000	124,001
Bush Dome Reservoir Operations	Month	Month			
Conservation gases from all sources	Gross Volume	Net Helium	Average Percent	Gross FYTD	Net FYTD
Total Withdrawn (Mcf*)	348,018	49,803	14.31%	3,762,568	582,362
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	0	0	23,073,063
Conservation Crude Sale Volume Transferred (Mcf*)	0	0	0	0	1,203,477
Conservation Helium in Storage (EOM) (Mcf*)		2,858,207	0	0	1,200,477
* Volumes in Mcf at 14.65 psia & 60°F		2,000,207			
In Kind Helium		Month	FYTD	CYTD	Cumulative
Sale Volumes Transferred (Mcf*)		40,475	128,733	86,869	3,808,981
Sale Volumes Outstanding (Mcf*)		8,248			
* Volumes in Mcf at 14.65 psia & 60°F				i	
	ſ				
Private Company Helium Storage Contracts		Month	Month		Annual
Contact Activity		Gross Volume	Net Helium	Average Percent	Helium FYTD
Crude Acquired (Mcf*)		17,665	11,654	65.97%	87150
Crude Disposed (Mcf*)		95,987	67,635	70.46%	650223
Net Balance (Mcf*)		(78,322)	(55,981)		(563,073)
Balance of Stored Helium End Of Month (Mcf*)			2,662,194		
* Volumes in Mcf at 14.65 psia & 60°F					
<u>Revenue / Charges</u>					
Helium Storage Contracts (Charges Billed (\$)				Month	FYTD
Storage Fees Billed (\$)				\$469,891	\$3,985,770
Resource Management Fees Billed (\$)				\$312,458	\$2,187,211
Total Storage and Resource Management fees collexted (\$)				\$782,349	\$6,172,981
Conservation Helium - Natural Gas - Liquid S	Sales	(Charges Billed (\$)		Month	FYTD
Conservation Crude Helium Sales				\$0	\$0
In Kind Sales				\$0	\$7,944,829
Natural Gas & Liquid Sales				(\$28,513)	\$3,337,897
					/
Helium Resources Evaluation				Month	FYTD
Revenue Collected from Federal Lease Holds				\$1,884,558	\$16,299,880
Helium Sample Collection Report for month Submittee	1 - 0	Received -	0	Analyzed - 1	5
Helium Sample Collection Report for month Submittee	1 - 0	Received -	0	•	5 I to nearest doll

Table 2 - Bush Dome Reservoir Operations

		Gross W	/ithdrawal	Net Helium	n Withdrawal	Nitro	ogen	Methane	Methane	Ethar	ne plus	Other (CO2, Ar, H2)	1 1
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
TOTAL		<u>348,018</u>	242,556,666	49,803	44,936,728	<u>85,904</u>	59,797,047	187,799	123,236,584	20,890	12,528,107	<u>3,622</u>	2,058,200
BIVINS A-3	May-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	May-19	29,434	13,056,541	10,902	7,507,345	7,337	3,214,391	9,864	2,061,334	1,096	207,668	235	65,803
BIVINS A-13	May-19	21,927	9,663,166	6,839	4,844,224	5,493	2,475,693	8,453	2,056,167	974	229,184	167	57,898
BIVINS A-14	May-19	24,685	10,919,887	5,740	5,882,857	6,095	2,758,491	11,351	1,993,673	1,273	216,196	226	68,669
BIVINS A-4	May-19	22,546	14,735,727	2,155	2,526,976	5,365	3,568,376	13,303	7,725,800	1,458	780,750	264	133,825
BUSH A-2	May-19	6,216	14,056,981	269	2,021,870	1,546	3,452,356	3,904	7,674,921	456	791,788	42	116,047
Injection	May-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	May-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	May-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	May-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	May-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	May-19	0	(2,527,801)	0	(1,848,815)	0	(601,353)	0	(42,016)	0	0	0	(35,617)
inj Bush A-2	May-19	0	(867,658)	0	(625,258)	0	(215,406)	0	(13,980)	0	0	0	(13,015)
Production	May-19	0	1,254,876	0	924,742	0	270,231	0	48,129	0	3,199	0	8,575
BIVINS A-1	May-19	0	2,686,608	0	48,896	0	636,995	0	1,798,415	0	175,704	0	26,597
BIVINS A-2	May-19	13,629	14,705,930	427	1,904,438	3,168	3,593,507	8,904	8,256,645	989	827,420	141	123,921
BIVINS A-5	May-19	17,552	16,971,739	3,076	2,215,768	4,431	4,169,879	8,887	9,481,511	1,011	958,346	147	146,235
BIVINS A-7	May-19	10,378	12,281,918	3,086	2,925,550	2,666	3,096,412	4,075	5,597,486	478	573,060	73	89,410
BIVINS A-9	May-19	21,252	11,506,971	612	226,596	5,399	2,840,445	13,531	7,564,554	1,522	770,910	189	104,465
BIVINS A-11	May-19	13,653	7,104,303	411	158,500	3,434	1,769,767	8,695	4,630,104	971	478,617	142	67,314
BIVINS A-15	May-19	24,880	11,022,029	419	451,281	5,758	2,618,914	16,622	7,118,796	1,759	716,332	322	116,706
BIVINS B-1	May-19	24,089	9,190,221	555	326,871	5,855	2,230,615	15,656	5,924,559	1,702	610,973	321	97,204
BIVINS B-2	May-19	21,788	7,669,034	406	144,480	5,493	1,922,345	13,950	4,975,437	1,521	515,566	418	111,207
BUSH A-1	May-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	May-19	19,735	13,157,679	6,127	3,201,940	4,930	3,259,153	7,628	5,973,500	877	608,416	173	114,669
BUSH A-4	May-19	16,716	9,382,888	1,312	1,644,651	4,247	2,351,187	9,928	4,825,153	1,128	495,555	101	66,342
BUSH A-5	May-19	28,400	18,085,337	6,860	4,197,791	7,178	4,545,104	12,718	8,359,850	1,468	858,078	177	124,513
BUSH A-8	May-19	12,525	4,904,665	229	89,890	3,098	1,191,188	8,100	3,231,103	870	328,034	228	64,449
BUSH A-9	May-19	0	3,860,915	0	105,037	0	930,915	0	2,537,187	0	253,463	0	34,312
BUSH A-11	May-19	13,248	5,025,583	286	143,050	3,157	1,202,414	8,665	3,286,395	941	334,753	198	58,970
BUSH B-1	May-19	5,364	3,472,817	93	65,011	1,253	823,541	3,564	2,320,321	398	229,910	56	34,033
FUQUA A-1	May-19	0	2,954,098	0	53,854	0	702,798	0	1,975,175	0	193,573	0	28,699
FUQUA A-2	May-19	0	132,119	0	2,404	0	31,322	0	88,458	0	8,637	0	1,297
FUQUA A-3	May-19	0	9,303,912	0	577,005	0	2,277,687	0	5,790,357	0	583,701	0	75,162
TT Fuel	May-19	1,311	0	23	0	307	0	871	0	97	0	14	0
field-	wide pcts			14.31%	18.53%	24.68%	24.65%	53.96%	50.81%	6.00%	5.17%	1.04%	0.85%

Latest estimates of reserves and feed to HEU

May-19

As of EOM

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

> est z-factor 0.980

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	2.192	0.333
Injected to Date 2019	0.000	0.000
Amount of Raw Gas Available to CHEU	71.766 ====>	7.824 total helium in reservoir
Estimated Bottom Hole Pressure	264.366	

Volumes in BCF

* 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

		Gross V	Vithdrawal	Net Helium	n Withdrawal	Nitr	ogen	Met	hane	Ethar	e plus	Other (CC	D2, Ar, H2)
		Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative	Month	Cumulative
Measured Feed	May-19	348,194	107,461,856	50,028	24,900,821	85,964	26,897,870	187,724	49,412,708	20,866	5,306,363	3,611	944,094
Calculated Feed	May-19	346,892	107,335,789	49,784	24,896,566	85,641	26,859,673	187,051	49,309,934	20,807	5,323,272	3,610	946,343
Feed to Box	May-19	343,739	106,629,056	49,784	24,896,745	85,641	26,859,756	187,051	49,309,980	20,807	5,323,267	457	239,309
Cheu Product	May-19	65,824	31,590,698	47,557	24,530,200	16,350	6,216,488	1,492	625,376	5	912	420	217,722
Residue	May-19	154,991	49,269,234	0	2,171	3,810	1,198,868	137,120	43,721,650	14,061	4,345,280	0	1,265
Cold Box Vent	May-19	47,711	17,589,146	254	90,714	41,118	15,605,844	6,327	1,830,897	0	121	12	61,570
Flare/Boot Strap	May-19	47,711	8,105,395	254	51,493	41,118	6,860,846	6,327	1,093,066	0	93,586	12	6,403
Fuel From Cheu	May-19	3,392	1,461,091	2	485	88	42,174	2,736	1,183,999	567	234,433	0	0
Shrinkage/Loss	May-19	4,195	551,753	0	0	0	0	0	0	4,195	551,753	0	0
Unaccounted*	May-19	39,008	4,004,475	354	169,854	17,182	2,968,818	21,459	860,785	(0)	1,099	12	3,919

*Before October 2004, the values are estimated

Storage Operations

Inventory (contained helium)		
	Government	Private
Beginning inventory	2,899,722	2,677,700
net acceptances +	0	0
redeliveries	0	(55,981)
In Kind Transfers	(40,475)	40,475
Conservation Crude Sales	0	0
Gain/loss	(1,040)	
Ending Inventory	2,858,207	2,662,194
Total Helium in Reservoir	7,823,624	
Total Helium in Storage	5,520,401	
Helium in native gas	2,303,224	

	Gross	Net Helium	Percent
Beginning inventory	40,728	28,743	70.57%
Measured to Pipeline (Private Plants)	17,665	11,654	65.97%
Measured from Pipeline (Private Plant	95,987	67,635	70.46%
HEU Production	65,824	47,557	72.25%
Injection	0	0	00.00%
Production	0	0	
Ending Inventory	27,278	19,279	70.68%
Gain/Loss	(952)	(1,040)	

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

May - 2019

Table 4 - In Kind Helium Sales

May - 2019

	-							,		
	NASA*	Navy*	Army*	Air Force*	DOE*	Other Fed*	Subtotal*	In Kind+	Charges I	Billed (\$)**
				In Kind H	elium					(billed quarterly)
Airgas Merchant G Month FYTD	Bases, Contra	act no. INC ⁴	18-0102							
Air Liquide Helium Month FYTD	n America, Ind	c., Contract	no. INC18	8-0104						
Air Products, L.P., Month FYTD	Contract no	. INC18-010	5							
Messer, LLC, Cont Month FYTD	tract no. INC	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	ct no. INC1	3-0116							
Total month	0	0	0	0	0	0	0	0		\$0
Total FYTD	48,166	0	0	-	0	41,244	89,409	88,025		₄₀ \$7,944,829
Total CYTD	21,412	0	0	-	0	20,873	42,285	41,631		\$3,954,945
Cumulative	2,096,617	108,685	450	-	422,045	977,801	3,877,189	3,817,154		\$232,325,399
In Kind Trans	fers						Month	FYTD	CYTD	Cumulative
Transferred Volume outstanding							40,475 8,248	128,733	86,869	3,808,981

* Volumes in Mcf at 14.7 psia & 70°F

+ Volumes in Mcf at 14.65 psia & 60°F

Natural Gas / Natural Gas Liquid Sales

	Natural Gas (Mcf)***	s (Mcf)*** NGLs (gal) Decatherms Avg Btu Value		Charges	Billed (\$)**				
El Paso Natural Ga		Provides Measure	d Firm/Interruptible Trai	nsportation Services		(billed monthly)			
Month	154,179		169,606	1,100	\$0				
FYTD	1,931,600		2,130,501	1,103	\$0				
Cumulative	48,619,176		52,927,551	1,089	(\$5,088,325)				
Minerals Manageme	ent Service	No Longer Provides Na	tural Gas Marketing Ser	vices					
Cumulative					(\$179,913)				
ETC Marketing Ltd		Purchaser - Natural Ga	S	\$\$/Unit					
Month			177,800	(\$0.366291)	(\$65,127)				
FYTD			2,169,986	\$1.341383	\$2,910,782				
Cumulative			52,786,525	\$4.164856	\$219,021,705				
Sandstone		Purchaser - Natural Ga	s Liquids						
Month		67,859	7,306	\$5.011404	\$36,613				
FYTD		724,097	78,463	\$5.443519	\$427,115				
Cumulative		15,098,669	1,608,627	\$10.553526	\$16,976,686				
	Natural Gas (Mcf)***	NGLs (gal)	Purchased (Dth's)	\$\$ Per Unit (\$\$/Dth)		Total (\$\$)			
Total month	154,179	67,859	185,106	(\$0.154037)		(\$28,513)			
Total FYTD	1,931,600	724,097	2,248,449	\$1.484533		\$3,337,897			
Total CYTD	907,180	352,587	1,035,251	\$0.940636		\$973,794			
Cumulative	48,619,176	15,098,669	54,395,152	\$4.256936		\$230,730,153			
Cumulative	48,619,176	15,098,669	54,395,152	\$4.256936		\$230,730,153			

*** 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	Billed (\$)**			
	Award Volume* Conservatio	Outstanding*	Sales*	Onarges	(billed quarterly)
Air Liquide Helium America, Inc.					(billed quarterly)
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	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	
	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	
FYTD	0	0			
Cumulative	16,220	0	0 16,220	\$0 \$1,720,180	
Uniper Global Commodities North Americ			10,220	φ1,720,100	
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	42,834	0	42,834	\$5,301,246	
Weil Group Resources LLC	42,004			φ0,001,240	
Month	0	0	0	\$0	
FYTD	0	0	0	\$0	
Cumulative	22,500	•	22,500	\$2,791,500	
NAH USA Helum Marketing, Inc	,000		,000	,,,	
Month	0	0	0	\$0	
FYTD	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	•		,,
······································	* Volumos	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	\$1,873,980	\$16,248,979
Natural Gas Royalties (1)	\$0	\$0
Natural Gas Rentals	\$0	\$0
Other	<u>\$50,901</u>	<u>\$532,239</u>
Revenue Collected from Federal Lease Holds	\$1,884,558	\$16,299,880

*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)	15	147

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	All Volumes in Mcf at 14.65 psia & 60°F										
Γ			Metered Gas Transferred Gas			ed Gas	Stored	Charges Billed			
(Gross Gas		Helium		Helium	Curren el activica	Helium		Helium)**
Total All Contrac	^* ~*	Month		FYTD	CYTD	Cumulative	Month	Cumulative	EOM	Month	FYTD
Crude Acquired	17,665	66.0%	11,654	87,150	61,092	27,427,314	47,781	61,055,547			
Crude Disposed	95,987	70.5%	67,635	650,223	394,438	54,504,901	7,306	26,803,243		\$469,891.13	Storage Fees
Grade-A Rdlvrd	95,907 0	10.570	07,000	000,220	0	1,478,718	7,500	20,003,243		<u>\$403,031.13</u> <u>\$312,457.68</u>	RMF Fees
Net/Balance	(78,322)		(55,981)	(563,073)		(28,556,305)	40,475	34,252,304	2,662,194	\$782,348.81	\$6,172,981
Total Prior Cont	· · · · · · · · · · · · · · · · · · ·	MINATED)	(00,001)	(000,010)	(000,010)	(20,000,000)	10,110	01,202,001	2,002,101	<i>Q102,010.01</i>	<i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>
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		
Messer, LLC, Co	ontract no.	3249				-,					
Crude Acquired											
Crude Disposed											
Net/Balance											
Praxair, Inc., Co	ntract no. 3	3251									
Crude Acquired											
Crude Disposed											
Net/Balance											
Air Products, L.F	P., Contract	t no. 3256									
Crude Acquired											
Crude Disposed											
Net/Balance											
Air Liquide Heliu	um America	a, Inc., Cont	tract no. 3	3284							
Crude Acquired											
Crude Disposed											
Net/Balance											
Keyes Helium Co	o., LLC, Co	ntract no. 3	3287								
Crude Acquired											
Crude Disposed											
Net/Balance											
Matheson Tri-Ga	as, Inc., Coi	ntract no. 3	288								
Crude Acquired											
Crude Disposed											
Net/Balance	0	ntreet ne d	2000								
Airgas Merchant	Gases, Co	ontract no.	3290								
Crude Acquired											
Crude Disposed Net/Balance											
Global Gases Ar	merica Cor	ntract no 3	293								
Crude Acquired			200								
Crude Disposed											
Net/Balance											
Linn Operating,	Inc., Contra	act no. 329	6								
Crude Acquired											
Crude Disposed											
Net/Balance		~~~									
IACX Energy, Co	ontract no.	3297									
Crude Acquired											
Crude Disposed											
Net/Balance	ommeditie	North Arr	orica	Contract	no 2000						
	omnodities	s North Am	enca LLC	, contract	110. 3298						
Crude Acquired Crude Disposed											
Net/Balance											
Weil Group Reso	ourcesIIC	. Contract	no, 3299								
Crude Acquired		,									
Crude Disposed											
Net/Balance											
NAH USA Helum	n Marketing	, Inc, Conti	act no. 3	300							
Crude Acquired	5										
Crude Disposed											
Net/Balance											
Progressive Che	emical Tech	nologies L	LC, Cont	ract no. 330)1						
Crude Acquired		-									
Crude Disposed											
Net/Balance											
										-	

Government Helium	
Remaining Crude Acquired beginning of the month	2,899,722
Crude Disposed: In Kind Sales transferred for the month	(40,475)
Conservation Crude Sales/Reserve Sell Down transferred (I	0
Gains and Loses for the month	<u>(1,040)</u>
Net/Balance of Purchased Helium Remaining for Sale	2,858,207
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*Includes In Kind and Conservation Crude transfers from Government storage ** New Contracts

Table 8 - Compression & CHEU (Operations)

May - 2019

Field/CHEU Compressor Operations		Month	FYTD	Cumulative
Spot gas fuel price *	\$ per/MMBTU	(\$0.37)	\$1.47	\$4.54
Fuel used * (now includes field compression well head)	total MMBTU	4,180	60,028	1,967,311
#1 Compressor run time *	hours	431	4,156	121,004
#2 Compressor run time *	hours	131	1,806	81,436
#3 Compressor run time *	hours	397	4,177	67,996

* Field/CHEU Compressor Operations based on May 19 activity

Crude Helium Enrichment Unit (CHEU	Month		FY	Cumulative		
CHEU Runtime	Runtime Hrs	Percent	Runtime Hrs	Percent	Runtime Hrs	
Processing feed gas	549	73.7%	5,575	95.6%	135,210	
Producing residue gas	539	72.4%	5,439	93.3%	132,071	
Producing helium product	474	63.8%	5,337	91.5%	128,293	
Producing natural gas liquids	528	71.0%	5,402	92.6%	127,440	
CHEU Utility Usage				FYTD	Cumulative	
Cheu Fuel Gas (Mcf) usage May 19			2,415	23,504	634,638	

Cheu Fuel Gas (Mcf) usage May 19	2,415	23,504	634,638
Cheu Pure Water Usage (gallons) May 19	1,183	3,967	320,131
Electricity Metered (Kwh) consumed Apr 19	2,883,035	23,064,280	202,001,902