

Federal Helium Program



BLM – Amarillo Field Office



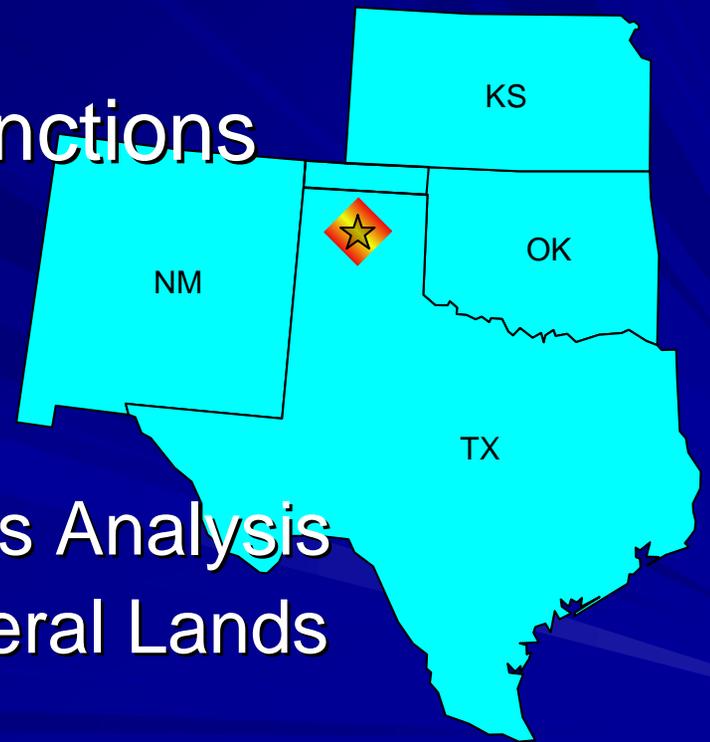
BLM – Amarillo Field Office

- Land Management

- Cross Bar Property

- 4 Main Helium-related Functions

- Program Authorities
- Storage & Transmission
- Crude Helium Sales
- Resource Evaluation & Gas Analysis
- Helium Production on Federal Lands



FHP Authorities

- Mineral Lands Leasing Act of 1920
 - 30 USC part 181
- Helium Privatization Act of 1996
 - 50 USC part 167
- 43 CFR Parts 16 & 3195
- Revolving Fund

Public Law 86-777
86th Congress, H. R. 10548
September 13, 1960

AN ACT

74 STAT. 918.

To amend the Helium Act of March 3, 1925, as amended, for the defense, security, and the general welfare of the United States.

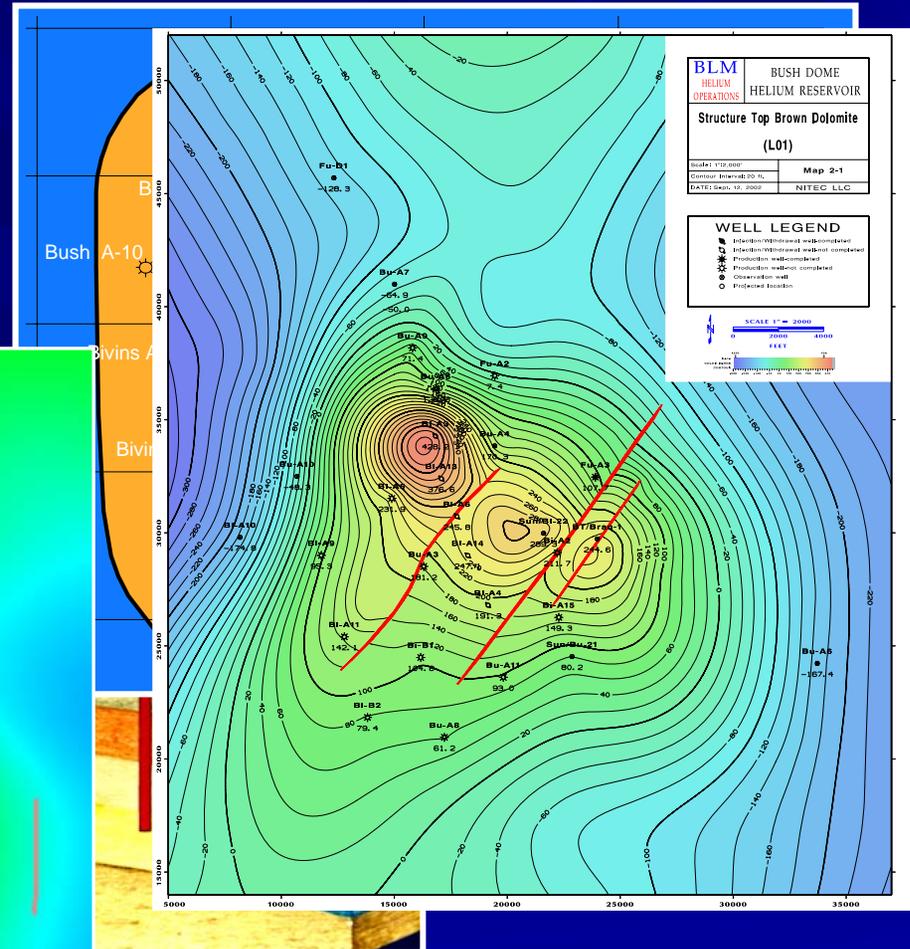
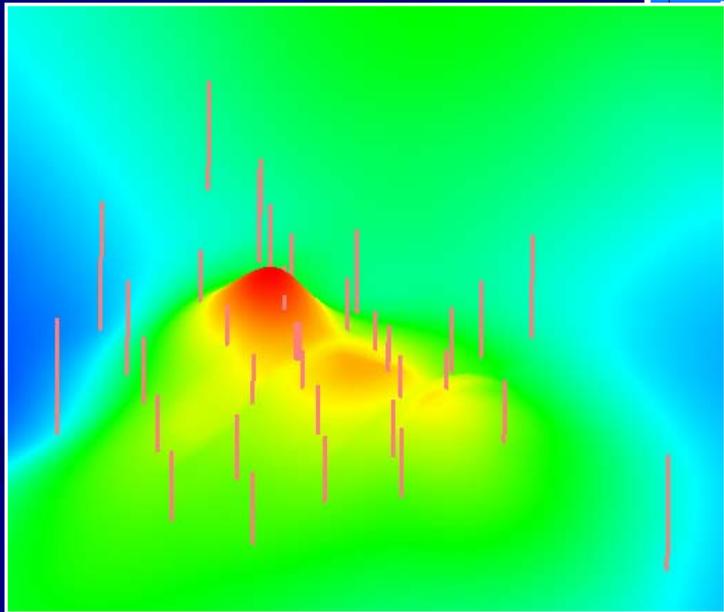
Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Helium Act Amendments of 1960."

SEC. 2. The Act entitled "An Act authorizing the conservation, production, and exploitation of helium gas, a mineral resource pertaining to the national health, safety, interest, and defense," approved August 1, 1952, is amended to read as follows:

Helium Act
Amendments
of 1960.

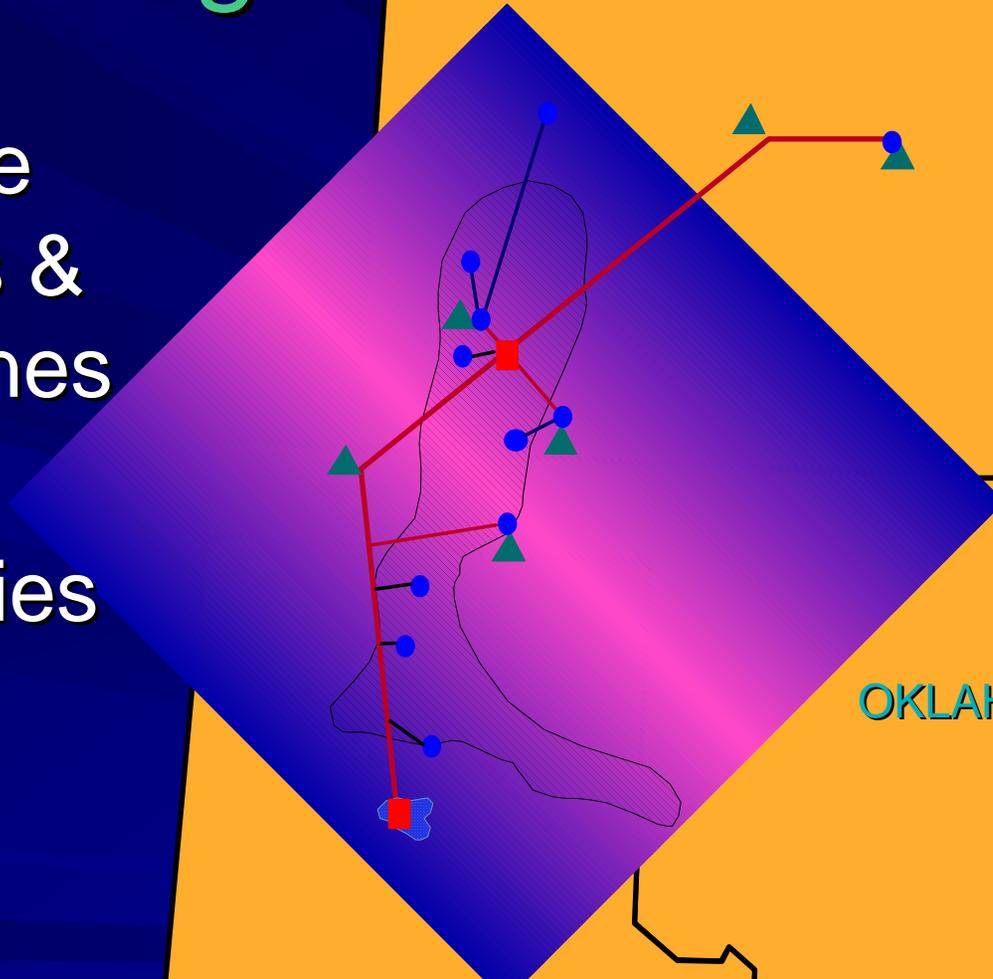
Storage & Transmission

Cliffside Field Bush Dome



Storage & Transmission

- Private Plants & Pipelines
- BLM Facilities



Storage & Transmission

■ Helium Storage Contracts

– *Storage Services*

- Generates ~ \$2.3 million per year
- Govt Helium in storage ~ 27 Bcf
- Private Helium in storage ~ 1.8 Bcf

– *Compression Services*

- Provides crude helium compression for private demands



Storage & Transmission

- Helium Storage Contracts (cont.)
 - *Helium Enrichment Services*
 - Recovers 20 percent of all costs associated with crude helium enrichment unit (CHEU)
- Crude Helium Enrichment Unit
 - Partnership with Private Industry
 - Private design, purchase & installation
 - BLM-operated

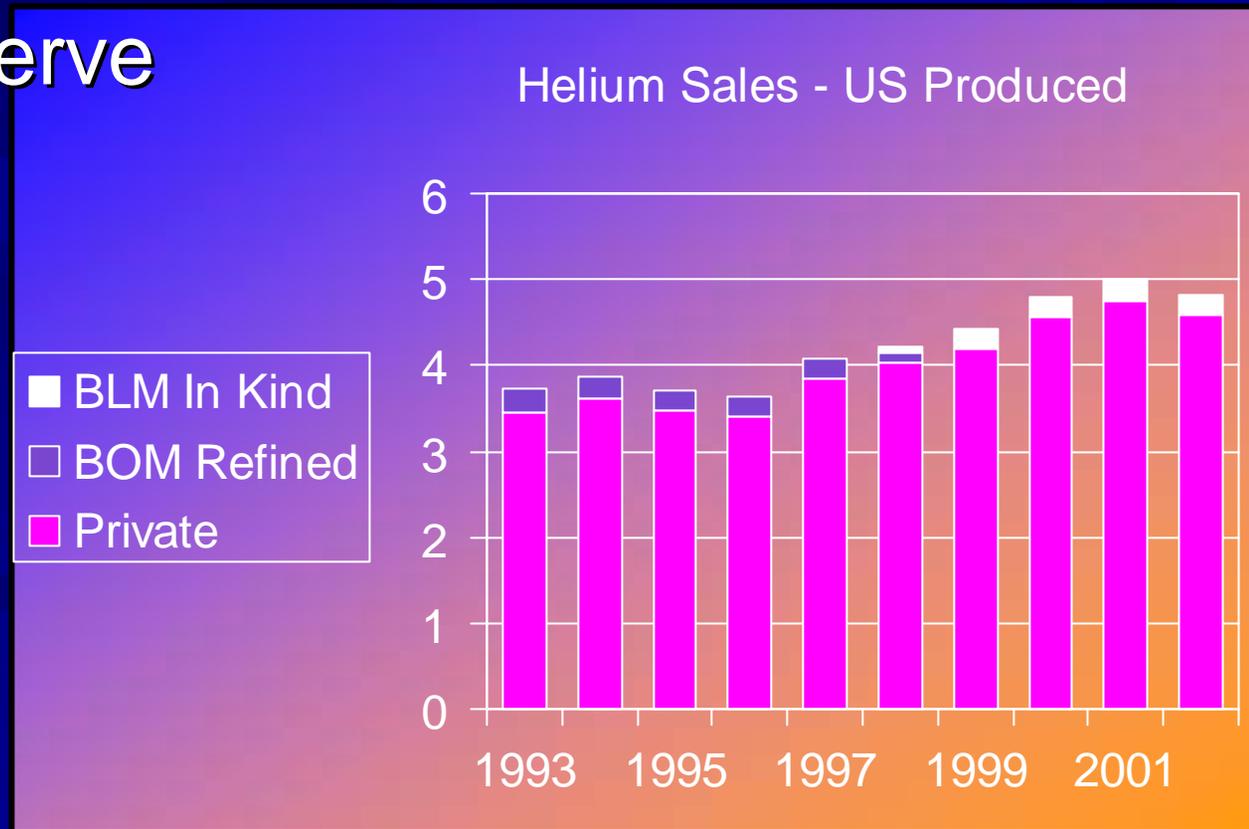


Storage & Transmission

- Natural gas sales for FY-01 & 02:
 - Over \$200,000 generated
 - Nearly 60 million cubic feet
- CHEU-generated natural gas sales
 - MMS Cooperative Agreement
 - El Paso transmission line connection
 - FY-03
 - 1.2 Bcf generating \$6.2 million
 - Future estimate
 - 5.5 Bcf generating \$20+ million annually

Crude Helium Sales

- In Kind Sales
- Open Market Sales
- Helium Reserve Sell Down



Crude Helium Sales

■ In Kind Sales

- Authorized by Helium Privatization Act (HPA) of 1996
 - Started in 1998
- Averaged 230 million ft³ from `99 to `03
- Averaged \$11.4 million in revenue over same
- Current price set @ \$54 per Mcf
 - FY-03 price was \$52.50 per Mcf
- Sales volume plus revenue increasing ~5% annually

Crude Helium Sales

■ Open Market Sales

- Crude helium sales based on private helium market need
 - Private helium in storage rapidly declining
 - Private crude helium reserves rapidly declining
- Completed pilot crude helium sale in March 2003
 - Bids received from 4 companies for 1.6 Bcf
 - Valued at \$86 million for FY-03
- Completed FY-04 sale in October 2003
 - Bids received from 3 companies for 675 MMcf
 - Valued at \$36 million

Crude Helium Sales

■ Helium Reserve Sell Down

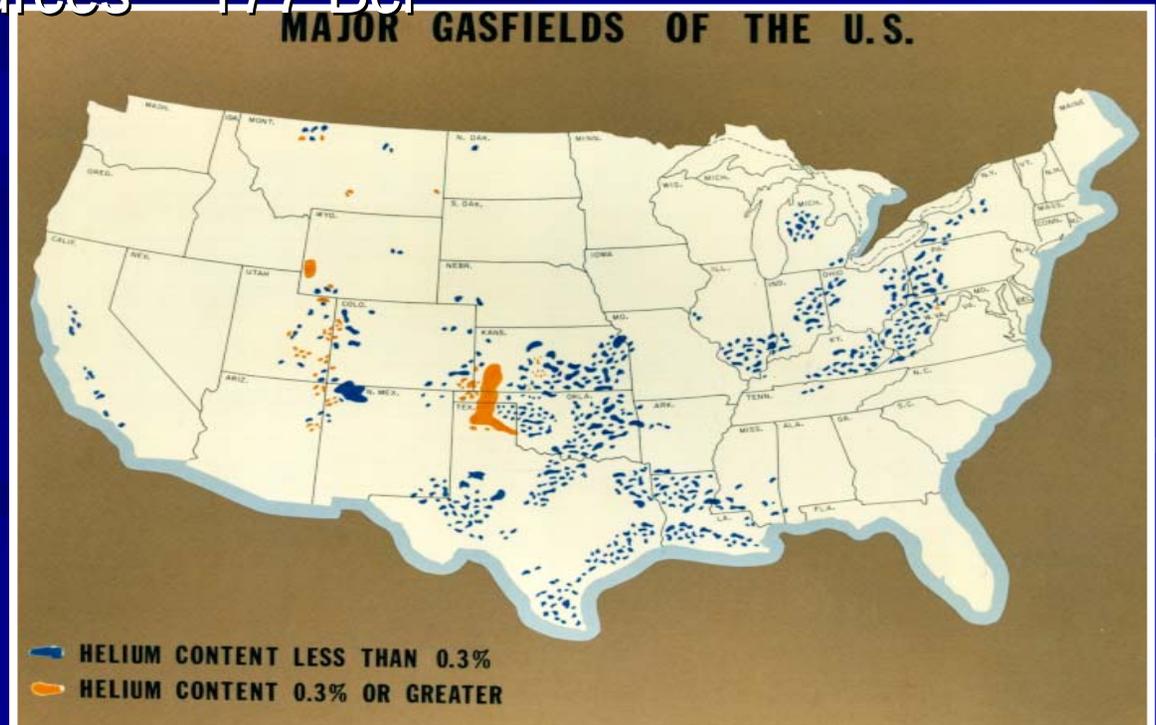
– Stipulated by HPA

- Starting no later than 2005
- Straight line basis through 2015
- “Offered” for sale
- Mandated pricing formula

Helium Evaluation & Gas Analysis

■ Helium Reserves

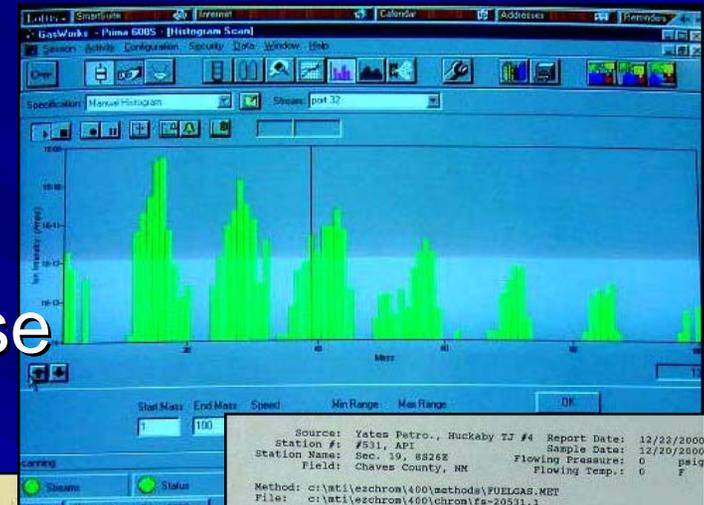
- TX - OK - KS - WY - CO - UT
- Helium Reserves – 146 Bcf
- Helium Resources – 177 Bcf



Helium Evaluation & Gas Analysis

■ Gas Analysis

- Field Survey
- Storage Program
- Federal Leased Lands
- 21,000+ Analysis Database



Source: Yates Patro., Huckaby T3 #4 Report Date: 12/22/2000
Station #: #531, API Sample Date: 12/20/2000
Station Name: Sec. 19, 8S26Z Flowing Pressure: 0 psig
Field: Chaves County, NM Flowing Temp: 0 F

Method: c:\ati\ezchron(400)\method\FUELGAS.MET
File: c:\ati\ezchron(400)\chron\fa-20531.1

Gas Analysis by Chromatograph

Name	Mole %	BTU	RD	GPM
Argon	0.038	0.000	0.000	
Nitrogen	8.712	0.000	0.000	
Methane	84.293	82.045	0.300	
Helium	0.501	0.000	0.000	
Hydrogen	0.020	0.065	0.000	
CO2	0.000	0.000	0.000	
Ethane	3.883	68.873	0.040	1.036
N2S	0.000	0.000	0.000	
Propane	1.402	35.360	0.021	0.385
i-Butane	0.219	7.140	0.004	0.069
n-Butane	0.464	15.173	0.012	0.169
i-Pentane	0.126	3.054	0.003	0.046
n-Pentane	0.145	5.826	0.004	0.059
Hexanes+	0.197	9.351	0.007	0.091
Ideal Total	100.000	999.928	0.092	1.856
Unnormalized Total	100.624			
Gross BTU/Seal Cu. Ft. (@ 60 deg F, 14.696)				Gasoline Content
Dry = 999.997				Propane GPM = 0.000
Sat. = 983.512				Butane GPM = 1.036
Actual = 999.997				Gasoline GPM = 0.729
(0.000 lbs. water/HCCF)				26# Gasoline GPM = 0.729
				Total GPM = 1.856
Real Relative Density Calculated = 0.0919				
On-Site Relative Density = 0.0000				
Gas Compressibility = 0.9999				

Helium Production on Federal Lands

- Determine Helium Ownership Rights
- Collect & Audit Fee Sales & Royalties
 - Implemented via Contract
 - Averages \$4.1 million annually
 - FY-03 - \$4.8 million
- Regulatory guidance underway

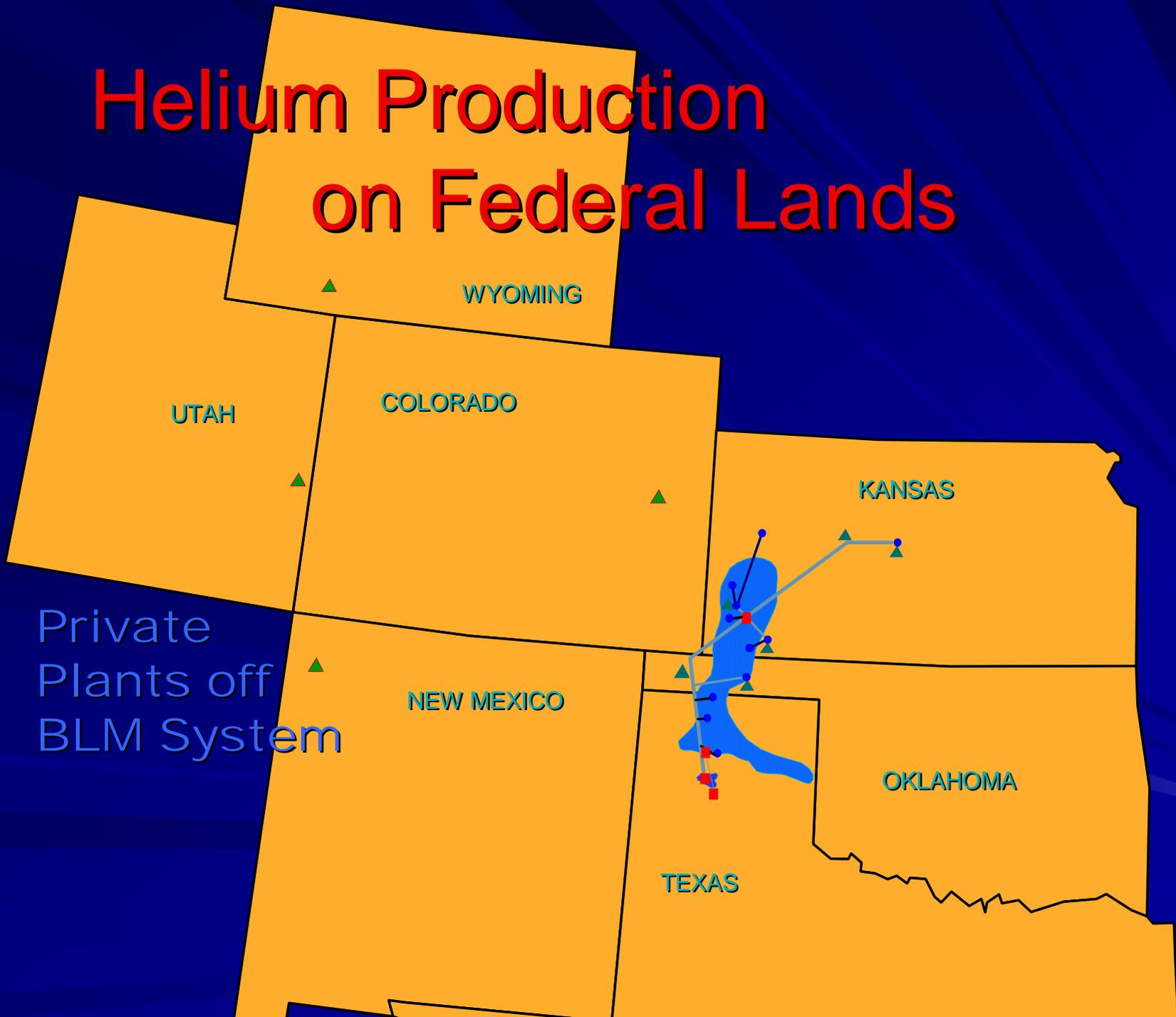
Form 3100-11
(June 1988)

Serial No.

**BUREAU OF LAND MANAGEMENT
OFFER TO LEASE AND LEASE FOR OIL AND GAS**

Sec. 8. Extraction of helium—Lessor reserves the option of extracting or having extracted helium from gas production in a manner specified and by means provided by lessor at no expense or loss to lessee or owner of the gas. Lessee shall include in any contract of sale of gas the provisions of this section.

Helium Production on Federal Lands



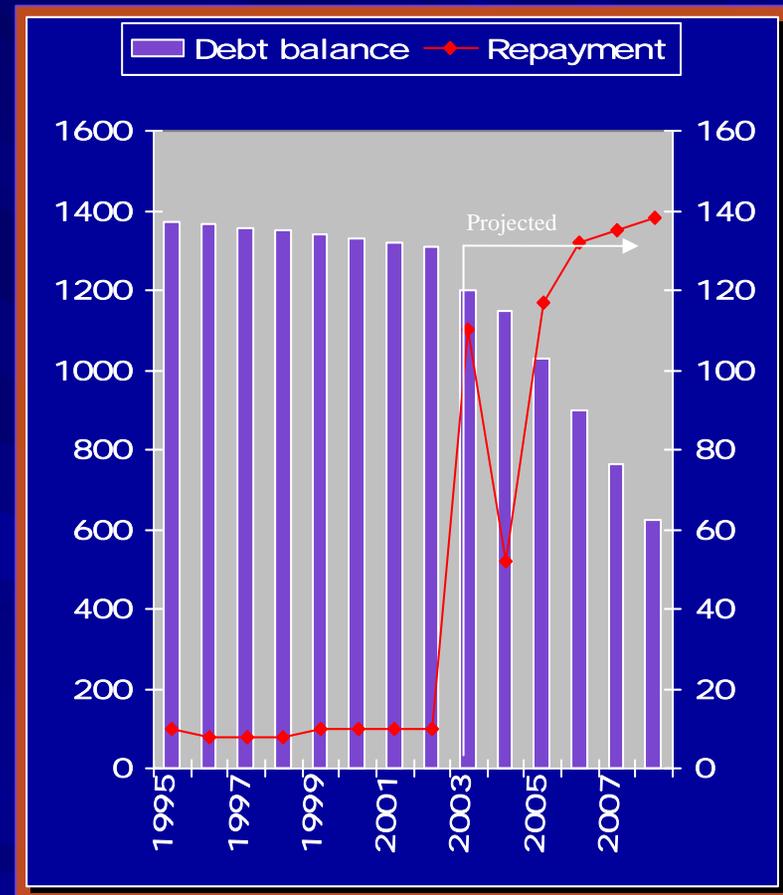
Financial Projections

Annual Revenues (in thousands)		Annual Expenditures (in thousands)	
In Kind Crude Helium Sales	\$11,000	Storage Ops	\$2,500
*Open Market/ Reserve Sell Off	\$115,000	Resource Ops	\$1,500
Helium Sales from Federal Lands	\$4,000	Compressor Ops	\$800
CHEU Ops Natural Gas/Liqs Sales	\$20,000	CHEU Operations	\$8,000
Storage Contracts	\$2,500	MMS & El Paso Agreements	\$800
Total	\$155,500	Total	\$13,600
Helium Fund (Current)	\$29,000	Helium Debt (Current)	\$1,199,200

* Assumes all helium offered for sale is purchased

Helium Debt

- Current debt – \$1,199 million (interest accrual frozen in 1995)
- Average payments from 1995 to 2002 - \$9.4 million
- FY-03 payment - \$110 million
- Proceeds from Program operations to pay off debt



Amarillo Field Office

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Amarillo Field Office

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Amarillo, TX 79101-3545

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(806) 356-1041 FAX

Information

[Map](#) | [Weather](#)



BLM Federal Helium Program

- [Helium Facts](#)
- BLM Proposes Rule for the Federal Helium Program
 - [News Release \(PDF format\)](#)
 - [Federal Helium Program Website](#)
- Helium Privatization Act of 1996 (PDF Format): [Public Law 104-273](#)
- Annual Report to Congress (PDF Format) [1995](#) | [1996](#) | [1997](#)
- Helium Resources of the U.S. (PDF Format) [2001](#)
- [NAS Helium Study](#) (The Impact of Selling the Federal Helium Reserve)
- [Helium Statistics and Information](#) (*USGS Minerals Information*)
- [Resource Advisors: Points of Contact](#) (PDF format)
- [Historical Architectural Engineering Report \(HAER\) Drawings for the Amarillo Exell Helium Plants](#)

Storage and Pipeline Operations

- Helium Storage Contract ([2003 Contract Reference PDF](#))
- [Statistical Reports](#)
- [Pipeline Activity](#)
- [Cliffside Field - Bush Dome Activity](#) (updated hourly)*
- [Helium Enrichment Unit Activity](#) (updated hourly)*
- [Helium Enrichment Flow Trend Activity](#) (updated hourly)*
- [Helium Enrichment Pressure Trend Activity](#) (updated hourly)*

*best if viewed in Internet Explorer

Web site

Crude Helium Sales

In Kind

- In Kind Crude Helium Sales Regulations (**interim**) [Summary](#) | [Full Document](#)
- In Kind Crude Helium Sales Regulations (**final**) [Summary](#) | [Full Document](#)
- Federal/Contractor Purchasers of Major Helium Requirements:
 - [FY-2002](#), [FY-2001](#), [FY-2000](#), [FY-1999](#) (PDF)
- [Authorized List of Federal Helium Suppliers](#)
- [Crude Helium Price](#)

Open Market

- Federal Register Notice requesting comments to proposed conservation helium sale. Comment period ended December 9, 2002. [PDF](#) | [HTML](#)
- Comments to proposed conservation helium sale [PDF](#)

New - Federal Register Notice for second Conservation Helium Sale. Notice closes October 30, 2003. [PDF](#) | [HTML](#)

Federal Register Notice for first Conservation Helium Sale. Notice closes March 3, 2003. [PDF](#) | [HTML](#)

Open Market Sales

- [March 2003 \(PDF\)](#)
- [November 2003 \(PDF\)](#)

Please note that Adobe Acrobat Reader is required to view some of these documents. [Download Acrobat Reader for free](#)



http://www.nm.blm.gov/amfo/amfo_home.html

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DOI - Bureau of Land Management

Cliffside Field Production Snapshot as of: 8:00 AM on 29-Jan-04



Natural Gas Meter Runs

Cliffside Field - Bush Dome

Bush Dome on the Web

DOI - Bureau of Land Management

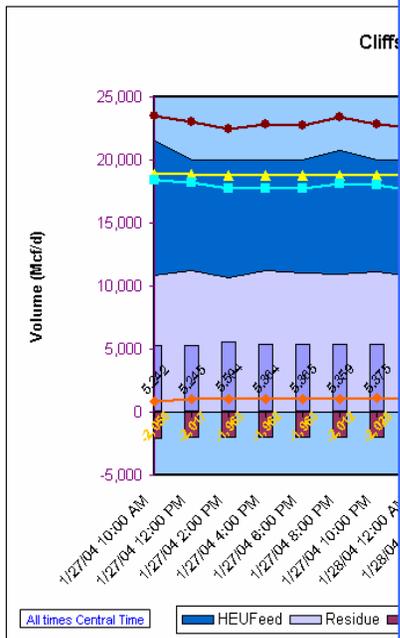
Cliffside Helium Enrichment Unit Snapshot as of: 8:00 AM on 29-Jan-04



from Bush Dome

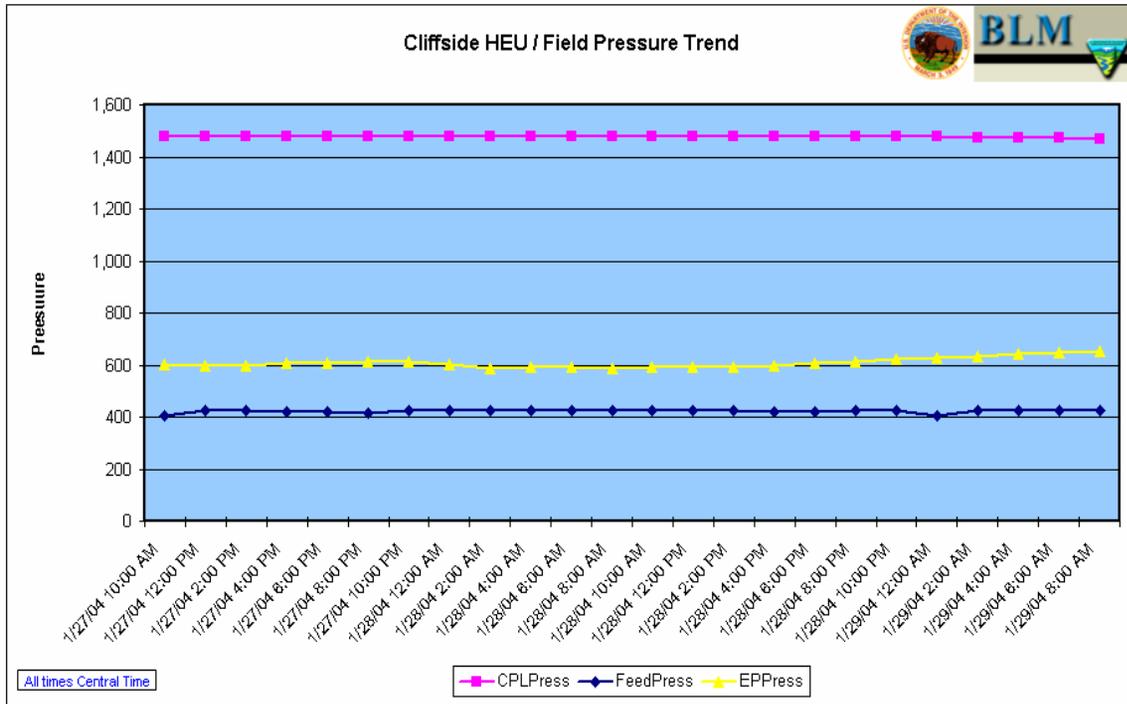


DOI - Bureau of Land Management



HEUFeed - helium-bearing natural gas
Residue - natural gas by-product
CH-Field - crude helium produced at Cliffside Field
CH-HEU - crude helium produced at HEU
HP-Field - helium percent contained in CH-Field
HP-HEU - helium percent contained in CH-HEU
HP-Feed - helium percent in HEUFeed
N2Vent - nitrogen percent contained in unit vent

DOI - Bureau of Land Management



CPLPress - crude helium pipeline pressure at Cliffside Field
FeedPress - helium-bearing natural gas feed pressure to helium enrichment unit
EPPress - residue natural gas pressure into El Paso-Cliffside lateral

HELIUM Future

- Program Direction
 - Continue Storage Operations
 - Begin Helium Reserve Sell Down
 - Complete Disposal Operations
- Questions.....

