Basic Outline to establish Crude Helium Storage Contract with BLM

- 1. Customer notifies BLM of their intent to establish a new storage contract:
 - (2-week estimated time frame to complete the executable process)
 - a. Customer provides BLM with Company addressing and signature information
 - b. BLM prepares two executable original copies for signature
 - c. Copies sent certified mail to the customer for signature
 - d. Customer returns both copies to BLM for final signature
 - e. BLM returns one original to customer
 - f. BLM retains one copy as the master file copy
 - g. Annual Fixed Cost \$12,000 per year

Basic Outline to establish Pipeline Connection Point Hot Tap to the BLM Pipeline System

- 2. Pipeline Connection Point Hot Tap
 - a. Customer Determines the State and Location of Pipeline Tap (Longitude & Latitude)
 - b. Tapping Fitting Service & Products i.e. 4" X 2" / 4" X 3" / 4" X 4" or 8" X 4" 900# RTJ
 - c. Building heated/cooled/electrical Customer is responsible for the purchase and installation of a building to house the measurement and sampling system equipment
 - d. Entire tie-in location must have a valve box with lid, lockable and surrounded by a chain link fence enclosure
 - e. Customer is responsible for the purchase and installation of the meter run
 - f. Customer purchases and installs a junior/senior (1) orifice meter
 - g. Customer is responsible for the purchase of a Daniels Gas Chromatograph
 - h. Customer is responsible for the purchase of ROC 809 and software package
 - i. Customer purchases and installs a gas sampling system
 - j. Valves and piping ⁽²⁾ system between tie-in and custody transfer must be approved by BLM-HFO Engineering team.
 - k. Annual Fixed Cost for Pipeline Connection Point \$20,000 per year

Reference:

- (1) If customer purchases and installs a junior orifice meter in lieu of a senior meter, at least annually the meter run will be taken off-line and de-pressured for BLM personnel to inspect the orifice plate surfaces and MIC the orifice size opening.
- (2) Government pipeline system can operate at a maximum of 1,800 psi; therefore all piping from tie-in to custody transfer point must be able to operate at that pressure.

Contract Holder

Phase 1 - Estimated Cost Breakdown

	Contract noider
Hot Tap - Contractor	~\$ 22,000
Annual Fixed Cost for Connection Point	\$ 20,000
Customer provides full port valve	~\$ 5,000
	\$47,000
BLM bills the storage contract holder for the Annual Fixed	
Cost	\$20,000

Phase 2 - Estimated Cost Breakdown

Contract Holder **BLM** Piping and meter run specifications must be in accordance with AGA 3, ANSI B31.3 and all other regulatory requirements. Storage Contract Holder purchases the following: Meter Run \$ 14,000 Orifice Meter Cost \$ 10,000 Daniels Chromatograph (GC) with 12 component streams \$ 70,000 ROC 809 Package installation, configuration and software \$ 22,000 Installation cost \$20-30,000, depends on line size tapped \$ 30,000 Sampling System with 60 Single Cavity Sample Cylinders 40.000 Building cost \$12-15,000

15.000

2,400

1,200 \$ 226,600

Example of 4" X 4" 900# RTJ Tap & Fitting Service

Satellite Pole plus Electrical, Heat Trace & Conduit

Valve Box, lockable, Chain link fencing around tie-in location

ATTACHED TO THE TOP RISER IS A 4-INCH 90 DEGREE ELBOW, 4X3 REDUCER, AND 3-INCH CHECK VALVE. CHECK VALVE IS SET IN THE HORIZONTAL POSITION. ELBOW AND REDUCER IS RATED AT SCHEDULE 80 AND THE CHECK VALVE IS RATED AT 900 SERIES 4-INCH RISER PIPE RATED AT SCHEDULE 80 **GROUND LEVEL 48 INCHES** ABOVE PIPELINE 31-5/8 INCHES FROM FACE OF PIPE VALVE BOX WITH LID, LOCKABLE TO TOP OF FACE OF RING JOINT OF **BALL VALVE** FLANGE, WELD NECK, 4-INCH, 900 SERIES; RING JOINT, W/ INSULATED FLANGE KIT VALVE, STEEL, 4-INCH BALL, 900 SERIES OR 2000 PSI WORKING PRESSURE, RING JOINT FLANGE BOTH ENDS, FULL PORT BALL VALVE 0 FLANGE, WELD NECK, 4-INCH, 900 SERIES, RING JOINT 4-INCH RISER PIPE RATED AT SCHEDULE 80 SPLIT TEE, WELDED, 4-INCH BY 4-INCH, HEAVÝ DUTY WEIGHT, SCHEDULE 80 NOTE: TEE FITTED OVER EXISTING 4-INCH PIPELINE AND WAS VERTICALLY SPLIT NOTE: 4-INCH GOVERNMENT PIPELINE CAN EXISTING 4-INCH OPERATE AT A MAXIMUM PRESSURE OF 1,800 GOVERNMENT PSI. THEREFORE ALL PIPING FROM TIE-IN TO **PIPELINE** CUSTODY TRANSFER POINT MUST BE ABLE TO OPERATE AT THIS PRESSURE. TO DATE, THE EXISTING OPERATING PRESSURE HAS OCCURED BETWEEN 600 TO 900 PSI. VALVE AND PIPING HOT TAP HOLE FINIAL DIAMETER SYSTEM BETWEEN TIE-IN AND CUSTODY TRANS-FER MUST BE APPROVED BY USBM-HFO. ENTIRE WAS 2-5/16 INCHES TIE-IN LOCATION WILL HAVE A CHAIN LINK ENCLOSURE.