

OIL CONSERVATION COMMISSION
Zone DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE 10-13-79

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

LC xxx

Dan Nutter

Gentlemen:

I have examined the application dated 10-8-79
for the Shen Development Co. Black Hill Area G-14-15-12-10
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Lease commingle with Central Basin Unit
production from the Gallup formation

Approved

Yours very truly,

AR Kendrick

HIXON DEVELOPMENT COMPANY

P. O. BOX 2810

FARMINGTON, NEW MEXICO 87401

October 8, 1979

Joe D. Ramey, Director
State of New Mexico
Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

Subject: Lease Commingling
Central Bisti Lower Gallup Unit
and NM 25445
San Juan County, New Mexico

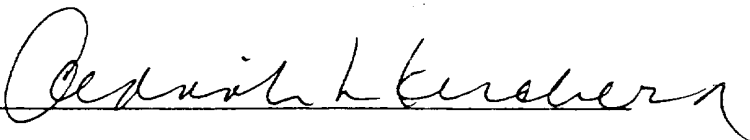
Dear Mr. Ramey:

Hixon Development Company requests administrative approval to commingle production from the recently drilled Black Hill Mesa No. 1 (Federal Lease NM 25445), Section 17, T25N, R12W with existing production from Central Bisti Lower Gallup Unit. Attached for your review and consideration is a proposed Plan of Commingling Production showing the purpose and basis for commingling, description of proposed measurement facilities and other pertinent data.

The Black Hill Mesa No. 1 is scheduled to be completed during the second week of October. The well will be tested into lease storage tanks. Production will be retained on the lease pending your approval of this request.

Very truly yours,

Hixon Development Company

by 

Aldrich L. Kuchera
Petroleum Engineer

ALK:cd

Attachments



HIXON DEVELOPMENT COMPANY

P. O. BOX 2810

FARMINGTON, NEW MEXICO 87401

October 8, 1979

Oil and Gas Supervisor
United States Department of the Interior
Geological Survey - Conservation Division
P.O. Box 26124
Albuquerque, New Mexico 87125

Subject: Request for Waiver of Objection
Lease Commingling
Central Bisti Lower Gallup Unit
and NM 25445
San Juan County, New Mexico

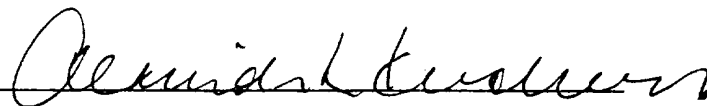
Dear Sir:

We respectfully request your waiver of objection to our commingling production from the Black Hill Mesa Well No. 1 (Federal Lease NM 25445) with existing Central Bisti Lower Gallup Unit production. Both the Black Hill Mesa lease and the Central Bisti Lower Gallup are operated by Hixon Development Company with 100% working interest.

Attached for your review is our letter request to the OCD along with pertinent discussion, measurement schematics and other data.

Very truly yours,

Hixon Development Company

by 

Aldrich L. Kuchera

ALK:cd

Attachments

HIXON DEVELOPMENT COMPANY

PLAN OF COMMINGLING PRODUCTION

BLACK HILL MESA WELL NO. 1 - CENTRAL BISTI LOWER GALLUP UNIT

SECTION 17, T25N, R12W

SAN JUAN COUNTY, NEW MEXICO

TABLE OF CONTENTS

INTRODUCTION

PURPOSE OF LEASE COMMINGLING

BASIS FOR LEASE COMMINGLING
ADMINISTRATIVE APPROVAL REQUEST

DESCRIPTION OF PROPOSED FACILITIES

CONCLUSION

EXHIBIT NO. 1 Existing Central Bisti Lower Gallup Unit

Oil Gathering System

EXHIBIT NO. 2 Black Hill Mesa No. 1

Production Measurement System

EXHIBIT NO. 3 Calibrated Test Vessel Schematic

EXHIBIT NO. 4 Lease Plat

Black Hill Mesa No. 1

INTRODUCTION

Hixon Development Company recently drilled the Bisti Lower Gallup Black Hill Mesa Well No. 1, 1650' FNL, 1650' FEL, Section 17, T25N, R12W, San Juan County, New Mexico. Because of Bisti Lower Gallup Pool rules, it is spaced on 80 acres. Of the well's dedicated 80 acres one 40 acre tract is located inside the 100% working interest Hixon Development Company operated Central Bisti Lower Gallup Unit. The second 40 acre tract is located outside the Unit on a 100% Hixon KGS Lease NM 25445. The two 40 acre tracts are being communitized.

An exception to Rule 309-A to permit commingling of production from the Black Hill Mesa Well No. 1 with production from the Central Bisti Lower Gallup Unit is requested.

PURPOSE OF LEASE COMMINGLING

The Black Hill Mesa Well No. 1's Bisti Lower Gallup spaced 80 acres is comprised of the S/2 of the NE/4 of Section 17, T25N, R12W, San Juan County, New Mexico. The SW/4 NE/4 40 acre tract is located outside the Central Bisti Lower Gallup Unit on Federal Lease NM 25445. This lease is held 100% by Hixon Development Company. The SE/4 NE/4 40 acre tract falls within the Central Bisti Lower Gallup Unit. The Unit is operated by Hixon Development Company with 100% working interest, but is encumbered with varying royalties and overriding royalties. The S/2 of the NE/4 Section 17 is being communitized.

The Unit is already entitled to take 1/2 of the Black Hill Mesa No. 1 crude oil and gas production in kind. Per Exhibit No. 1 a Central Bisti Lower Gallup Unit oil and gas flowline collection manifold is located 500' northeast of the Black Hill Mesa No. 1 well. The logical approach is to accurately measure all crude oil and gas leaving the Black Hill Mesa location, utilize the existing Central Bisti Unit crude oil gathering system for the purpose of transferring oil and gas to an existing tank battery in Section 5, T25N, R12W, sell this production through an existing approved LACT Unit and gas sales meter. One half of the Black Hill Mesa commingled production sold will be allocated back to the NM 25445 lease.

The Black Hill Mesa No. 1 production will qualify as new and uncontrolled oil. The Central Bisti Lower Gallup crude oil sells as stripper. Both types of oil have the same gravity and will receive a common market price.

The purpose of seeking an exception to Rule 309-A is to: (1) Utilize existing and costly facilities already constructed in the vicinity of the Black Hill Mesa Well No. 1. This will prevent the necessity of constructing a new oil and gas treating tank battery. (2) Without commingling it will be necessary to truck crude oil 3 miles to an existing sales point. This will require hand gauging storage tanks, would result in oil API gravity loss and may not be as accurate as the proposed test system. (3) Commingling production will assure an outlet for any surplus produced casing-head gas. Because of Indian surface right of way delays, our experience tells us that it could be as long as a year to 1-1/2 years before a gas sales hookup is obtained. Also because of expected low volumes of casinghead gas, installing a separate

gas pipeline to this well may not be economically feasible. (4)
The Black Hill Mesa No. 1 well is a Bisti Lower Gallup pool
stepout well. It is expected to be a low volume producer. Tank
battery installation costs may cause this well to be uneconomical
to produce.

BASIS FOR LEASE COMMINGLING
ADMINISTRATIVE APPROVAL

Hixon Development Company requests an exception to Rule 309-A to permit the commingling of production from two separate leases in a common tank battery without notice and hearing. This request is based on the following:

1. All production to be commingled will be from the same common source of supply, i. e. the Bisti Lower Gallup Oil Pool.
2. Adequate facilities will be provided for accurately determining production from the Black Hill Mesa Well No. 1. Production from the Central Bisti Lower Gallup Unit is also being accurately determined.
3. Hixon Development Company as 100% working interest owner in the Federal Lease NM 25445 and operator with 100% working interest in the Central Bisti Lower Gallup Unit consents to commingling the Black Hill Mesa and Central Bisti Lower Gallup Unit production. Shell Pipeline, as purchaser of the Central Bisti Lower Gallup Unit production has been notified by certified mail of our intention to commingle.
4. Though Hixon Development Company has 100% working interest in the Central Bisti Lower Gallup Unit, it is encumbered with varying overriding royalties. The Federal Lease NM 25445 is 100% held by Hixon Development Company without any overriding royalties or other encumbrances. Because of the various State, Federal and Indian royalties and overrides in the Unit, production from the Black Hill Mesa Well No. 1 will be accurately measured and determined in accordance with applicable provisions of the Commission's "Manual for the Installation and Operation of Commingling Facilities".

DESCRIPTION OF PROPOSED FACILITIES

Oil, gas and water will be tested monthly through a 30" x 12' 6" CE-Natco test treater. The test treater will be a 3-phase separation vessel with oil, water and gas legs. Gas produced in excess of well requirements will be measured through a 3" flange tap orifice meter run equipped with 7 day recording rate and temperature meters. Oil and water will be dumped separately through 1" positive displacement Rockwell or Floco meters equipped with barrel volume totalizers. Calibrations of the two 1" PD meters will be carried out monthly through a CE-Natco Calibrated Volume (1-bbl) fluid meter.

Functions of the individual components of the system are as follows:

- A. Test Treater - Is of design to efficiently separate gas, oil and any water. Will handle all gas and fluid volume surges as may result from well heading conditions. Will provide a quieting section for separation of free water from the oil emulsion.
- B. Pressure Control Valves - For the control of treater back pressure, the valves will be sized to handle maximum instantaneous oil, water and gas rates and be able to control within a small psi variation.
- C. Level Controls - The oil-water level controls will be a reliable snap-acting type with a float arm of sufficient length to obtain a maximum fluid volume for each dump cycle. They will be located and installed so the incoming oil-emulsion fluid will not interfere with their proper operation and will be adjusted to trip well above the fluid outlet so as to prevent gas entry. The "free water" level control will be of the interface type with a snap-acting output to control the discharge of water.
- D. Gas Measurement - Any gas produced in excess of pumping unit engine requirements will be measured through the separator utilizing a 3" flange tap Daniels orifice meter run. Gas rate will be recorded on an American Meter square root 7-day 50" 100 psi spring recorder. Temperature will be recorded with a Foxboro 7-day temperature recorder.
- E. PD Meter Calibration - The test treater will be calibrated monthly (oil and water) through a calibrated 1-barrel volume test vessel. The vessel will simulate actual producing conditions.

CONCLUSION

We respectfully submit that the proposed Plan of Lease Commingling will result in numerous benefits to the royalty owners and that ultimate recovery will be increased by extending the economic life of both the Lease NM 25445 and the Unit Area. It is our opinion that the design of the measurement facility follows sound engineering principles and that prevention of waste will be achieved.

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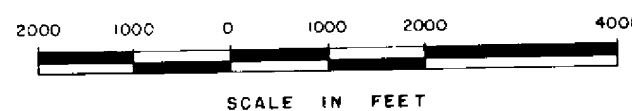
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CRUDE OIL GATHERING SYSTEM

— MAIN GATHERING LINE
— WELL FLOW LINES

HIJON DEVELOPMENT COMPANY
CENTRAL BISTI UNIT

San Juan County, New Mexico



DATE: JANUARY, 1978 Revised 10/4/79

CENTRAL BISTI UNIT BOUNDARY

EXHIBIT No. 1

HIXON DEVELOPMENT COMPANY

PROJECT BLACK HILL MESA NO. 1

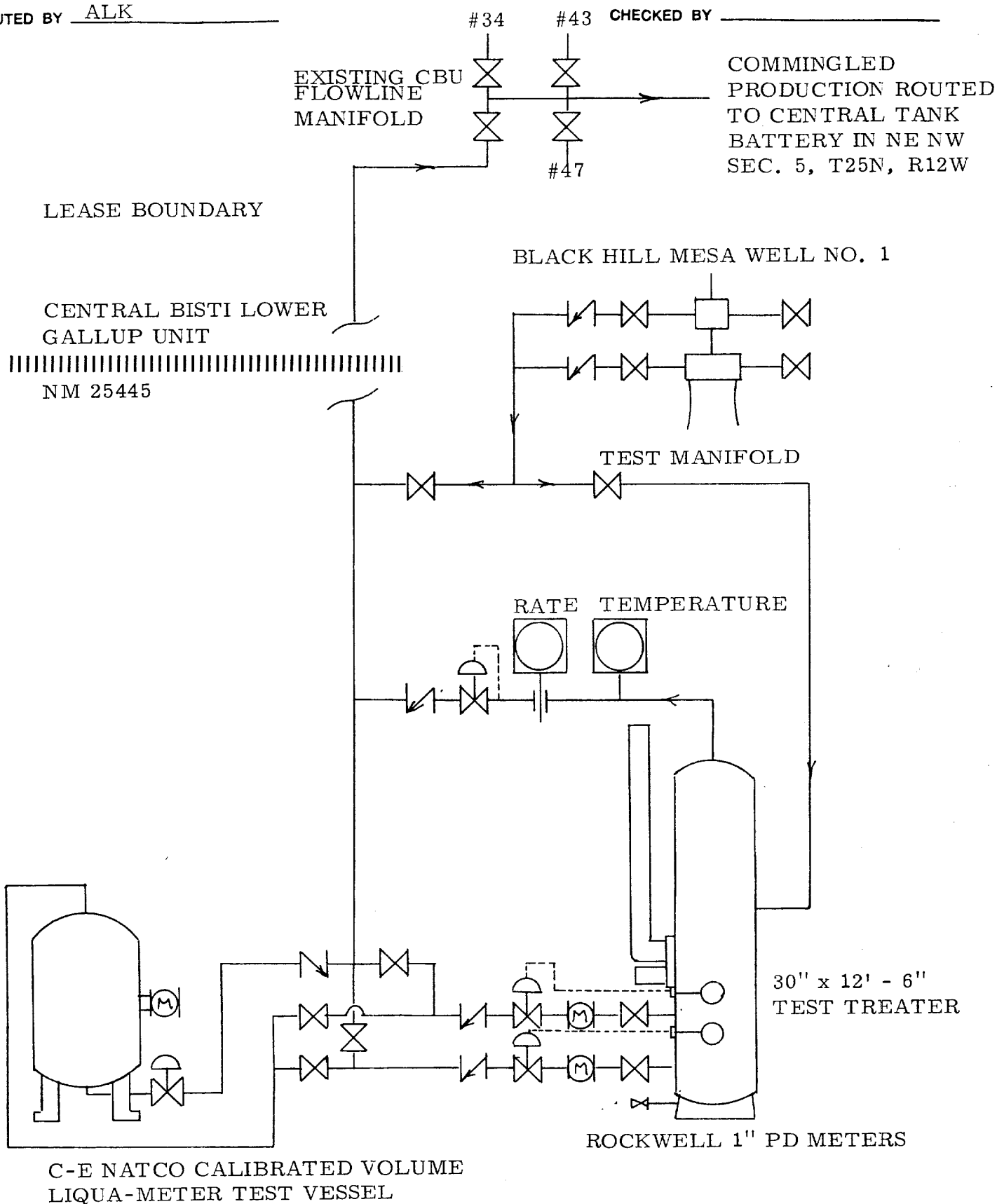
JOB NO. _____

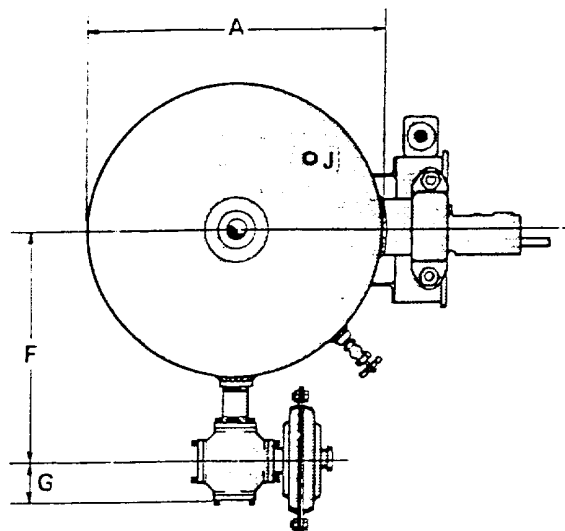
PURPOSE PRODUCTION MEASUREMENT SYSTEM

SHEET _____ OF _____

COMPUTED BY ALK

CHECKED BY _____



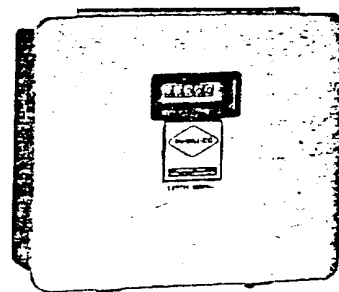
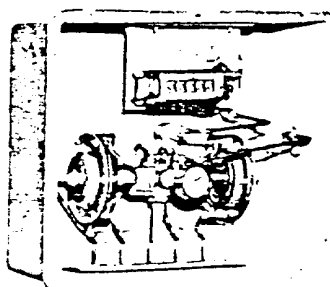
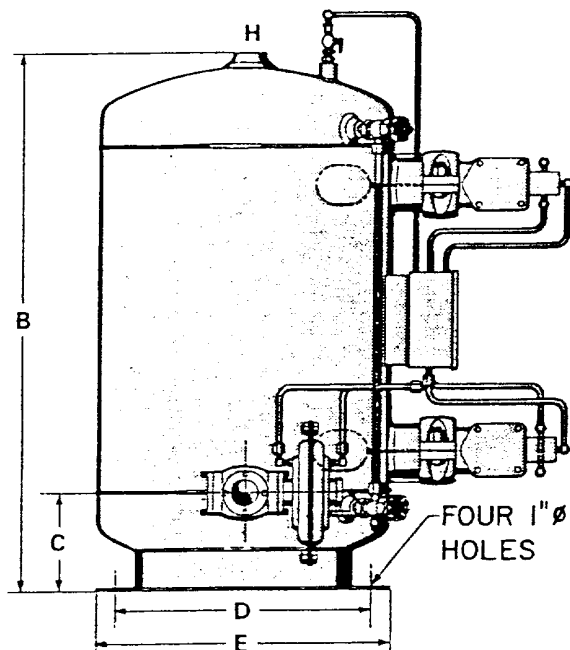


For measurement of liquid produced from individual wells, individual zones or individual leases under a common royalty account. Also, a LIQUA-METER unit may be used in conjunction with a test separator or treater to determine the production of individual wells or zones without interrupting the production of other wells which continue to flow through the common production facilities. A pneumatic totalizer records the number of dumps of the meter and is convertible to barrels run during the test.

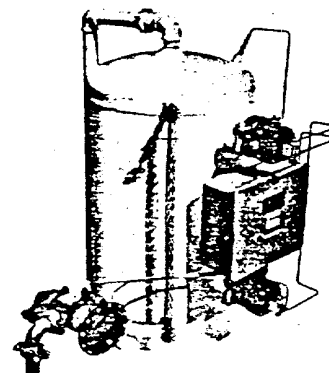
Standard sizes are 1/2, 1 and 2 barrel meters. Type "B" LIQUA-METER units have two level controls, large-ported booster relay, three-way valve, and a meter control assembly with pneumatic totalizer installed in a weather-proof enclosure with plexiglass window.

Accurate within the limits usually prescribed by producer, royalty owner and regulatory body for measuring oil to be commingled.

Throughput of volumetric LIQUA-METER unit cannot be exactly stated due to the numerous factors which influence its ability to fill and dump. Some of the factors are: gravity, viscosity, elevation of upstream filling vessel, minimum elevation of liquid in upstream vessel, pressure in upstream vessel, downstream pressure in dump line, etc.



A 12" manway can be installed, as an option, in the top of the vessel to facilitate application of an internal coating.



D I M E N S I O N S

| Model No. | Nominal Dump Capacity Bbl. | Valve Size | A | B | C | D | E | F | G | H | J |
|-----------|----------------------------|---------------|-------|-----------|--------|-----------|-------|--------------|----------|----|------|
| IMT-120 | 1/2 | 2" DDQY-204-3 | 1'-8" | 3'-2" | 7" | 1'-6" | 1'-8" | 1'-4 3/16" | 3 11/16" | 2" | 1/2" |
| IMT-124 | 1 | 2" DDQY-204-3 | 2'-0" | 3'-9 1/2" | 8" | 1'-9" | 2'-0" | 1'-6 3/16" | 3 11/16" | 2" | 1/2" |
| IMT-130 | 2 | 3" DDQY-304-3 | 2'-6" | 4'-6" | 9 1/2" | 2'-4 1/4" | 2'-6" | 1'-11 14/16" | 6 3/8" | 2" | 1/2" |

METERING & TESTING EQUIPMENT

TYPE "B" LIQUA-METERS

Issue 1; December 29, 1975

page G-132-A