

APPLICATION FOR BYPRODUCT MATERIAL LICENSE
INDUSTRIAL

a. NEW LICENSE

b. AMENDMENT TO:
LICENSE NUMBER

35-19041-01

c. RENEWAL OF:
LICENSE NUMBER

See attached instructions for details.

Completed applications are filed in duplicate with the Division of Fuel Cycle and Material Safety, Office of Nuclear Material Safety, and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555 or applications may be filed in person at the Commission's office at 1717 H Street, NW, Washington, D. C. or 7915 Eastern Avenue, Silver Spring, Maryland.

2. APPLICANT'S NAME (Institution, firm, person, etc.)

MIDCO, INC.

TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
(405) 691-3911

3. NAME OF PERSON TO BE CONTACTED REGARDING THIS APPLICATION

Keith E. Moon, Consultant

TELEPHONE NUMBER: AREA CODE - NUMBER EXTENSION
(915) 337-6027 367-9314

4. APPLICANT'S MAILING ADDRESS (Include Zip Code)

P. O. Box 6322
Moore, OK 731535. STREET ADDRESS WHERE LICENSED MATERIAL WILL BE USED
(Include Zip Code)4230 S.W. 134th Street, Oklahoma City, OK;
Section Line Road, Woodward, OK 73801;
and temporary job site locations.

(IF MORE SPACE IS NEEDED FOR ANY ITEM, USE ADDITIONAL PROPERLY KEYED PAGES.)

6. INDIVIDUAL(S) WHO WILL USE OR DIRECTLY SUPERVISE THE USE OF LICENSED MATERIAL

(See Items 16 and 17 for required training and experience of each individual named below)

FULL NAME

TITLE

a. SEE ENCLOSED TRAINING AND SAFETY MANUAL

b.

c.

7. RADIATION PROTECTION OFFICER

L. D. "Chuck" Robertson

Attach a resume of person's training and experience as outlined in Items 16 and 17 and describe his responsibilities under Item 15.

8. LICENSED MATERIAL

L I N E NO.	ELEMENT AND MASS NUMBER A	CHEMICAL AND/OR PHYSICAL FORM B	NAME OF MANUFACTURER AND MODEL NUMBER (If Sealed Source) C	MAXIMUM NUMBER OF MILLICURIES AND/OR SEALED SOURCES AND MAXIMUM ACTI- VITY PER SOURCE WHICH WILL BE POSSESSED AT ANY ONE TIME D
(1)	Americium 241	Sealed Sources	no change (see license)	no change (see license)
(2)	Cobalt 60	Solid (wires)		Not to exceed 20 uCi each wire
(3)	Iodine 131	Any		250 mCi maximum, not to exceed 20 mCi per unit
(4)	Iridium 192	Any		250 mCi maximum, not to exceed 40 mCi per unit

DESCRIBE USE OF LICENSED MATERIAL
E

(1) Neutron logging in oil and gas wells.

(2) Casing and perforation markers.

8508120626 850725

REG4 LIC30

35-19041-01

PDR

(3) Tracer studies in oil and gas wells.

(4) Tracer studies in oil and gas wells.

9. STORAGE OF SEALED SOURCES

LINE NO.	CONTAINER AND/OR DEVICE IN WHICH EACH SEALED SOURCE WILL BE STORED OR USED. A.	NAME OF MANUFACTURER B.	MODEL NUMBER C.
(1)			
(2)	NO CHANGE		
(3)			
(4)			

10. RADIATION DETECTION INSTRUMENTS

LINE NO.	TYPE OF INSTRUMENT A.	MANUFACTURER'S NAME B.	MODEL NUMBER C.	NUMBER AVAILABLE D.	RADIATION DETECTED (alpha, beta, gamma, neutron) E.	SENSITIVITY RANGE (milliroentgens/hour or counts/minute) F.
(1)						
(2)						
(3)	NO CHANGE					
(4)						

11. CALIBRATION OF INSTRUMENTS LISTED IN ITEM 10

<input type="checkbox"/> a. CALIBRATED BY SERVICE COMPANY NAME, ADDRESS, AND FREQUENCY NO CHANGE	<input type="checkbox"/> b. CALIBRATED BY APPLICANT Attach a separate sheet describing method, frequency and standards used for calibrating instruments.
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12. PERSONNEL MONITORING DEVICES

TYPE (Check and/or complete as appropriate.) A.	SUPPLIER (Service Company) B.	EXCHANGE FREQUENCY C.
<input type="checkbox"/> (1) FILM BADGE <input type="checkbox"/> (2) THERMOLUMINESCENCE DOSIMETER (TLD) <input type="checkbox"/> (3) OTHER (Specify): _____ _____	NO CHANGE	<input type="checkbox"/> MONTHLY <input type="checkbox"/> QUARTERLY <input type="checkbox"/> OTHER (Specify): _____ _____

13. FACILITIES AND EQUIPMENT (Check where appropriate and attach annotated sketch(es) and description(s).)

<input type="checkbox"/> a. LABORATORY FACILITIES, PLANT FACILITIES, FUME HOODS (Include filtration, if any), ETC. <input checked="" type="checkbox"/> b. STORAGE FACILITIES, CONTAINERS, SPECIAL SHIELDING (fixed and/or temporary), ETC. See attached facility drawing for new station in Woodward, Okla. and bunker design. <input type="checkbox"/> c. REMOTE HANDLING TOOLS OR EQUIPMENT, ETC. <input type="checkbox"/> d. RESPIRATORY PROTECTIVE EQUIPMENT, ETC.

14. WASTE DISPOSAL

a. NAME OF COMMERCIAL WASTE DISPOSAL SERVICE EMPLOYED NO CHANGE
b. IF COMMERCIAL WASTE DISPOSAL SERVICE IS NOT EMPLOYED, SUBMIT A DETAILED DESCRIPTION OF METHODS WHICH WILL BE USED FOR DISPOSING OF RADIOACTIVE WASTES AND ESTIMATES OF THE TYPE AND AMOUNT OF ACTIVITY INVOLVED. IF THE APPLICATION IS FOR SEALED SOURCES AND DEVICES AND THEY WILL BE RETURNED TO THE MANUFACTURER, SO STATE.

INFORMATION REQUIRED FOR ITEMS 15, 16 AND 17

Describe in detail the information required for Items 15, 16 and 17. Begin each item on a separate page and key to the application as follows:

15. **RADIATION PROTECTION PROGRAM.** Describe the radiation protection program as appropriate for the material to be used including the duties and responsibilities of the Radiation Protection Officer, control measures, bioassay procedures (if needed), day-to-day general safety instruction to be followed, etc. If the application is for sealed source's also submit leak testing procedures, or if leak testing will be performed using a leak test kit, specify manufacturer and model number of the leak test kit.
16. **FORMAL TRAINING IN RADIATION SAFETY.** Attach a resume for each individual named in Items 6 and 7. Describe individual's formal training in the following areas where applicable. Include the name of person or institution providing the training, duration of training, when training was received, etc.
 - a. Principles and practices of radiation protection.
 - b. Radioactivity measurement standardization and monitoring techniques and instruments.
 - c. Mathematics and calculations basic to the use and measurement of radioactivity.
 - d. Biological effects of radiation.
17. **EXPERIENCE.** Attach a resume for each individual named in Items 6 and 7. Describe individual's work experience with radiation, including where experience was obtained. Work experience or on-the-job training should be commensurate with the proposed use. Include list of radioisotopes and maximum activity of each used.

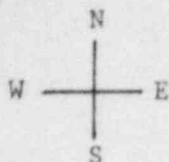
18. CERTIFICATE

(This item must be completed by applicant)

The applicant and any official executing this certificate on behalf of the applicant named in Item 2, certify that this application is prepared in conformity with Title 10, Code of Federal Regulations, Part 30, and that all information contained herein, including any supplements attached hereto, is true and correct to the best of our knowledge and belief.

WARNING.—18 U.S.C., Section 1001; Act of June 25, 1948; 62 Stat. 749; makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

<p>a. LICENSE FEE REQUIRED (See Section 170.31, 10 CFR 170)</p> <p>Amendment 1 91 WV 6 NOV 1981</p>	<p>b. CERTIFYING OFFICIAL (Signature) <i>Thurman A. Heck, Jr.</i></p> <p>c. NAME (Type or print) Thurman A. Heck, Jr.</p>
<p>(1) LICENSE FEE CATEGORY: Well Logging</p>	<p>d. TITLE Cased Hole Manager</p>
<p>(2) LICENSE FEE ENCLOSED: \$ 110.00</p>	<p>e. DATE May 15, 1981</p>

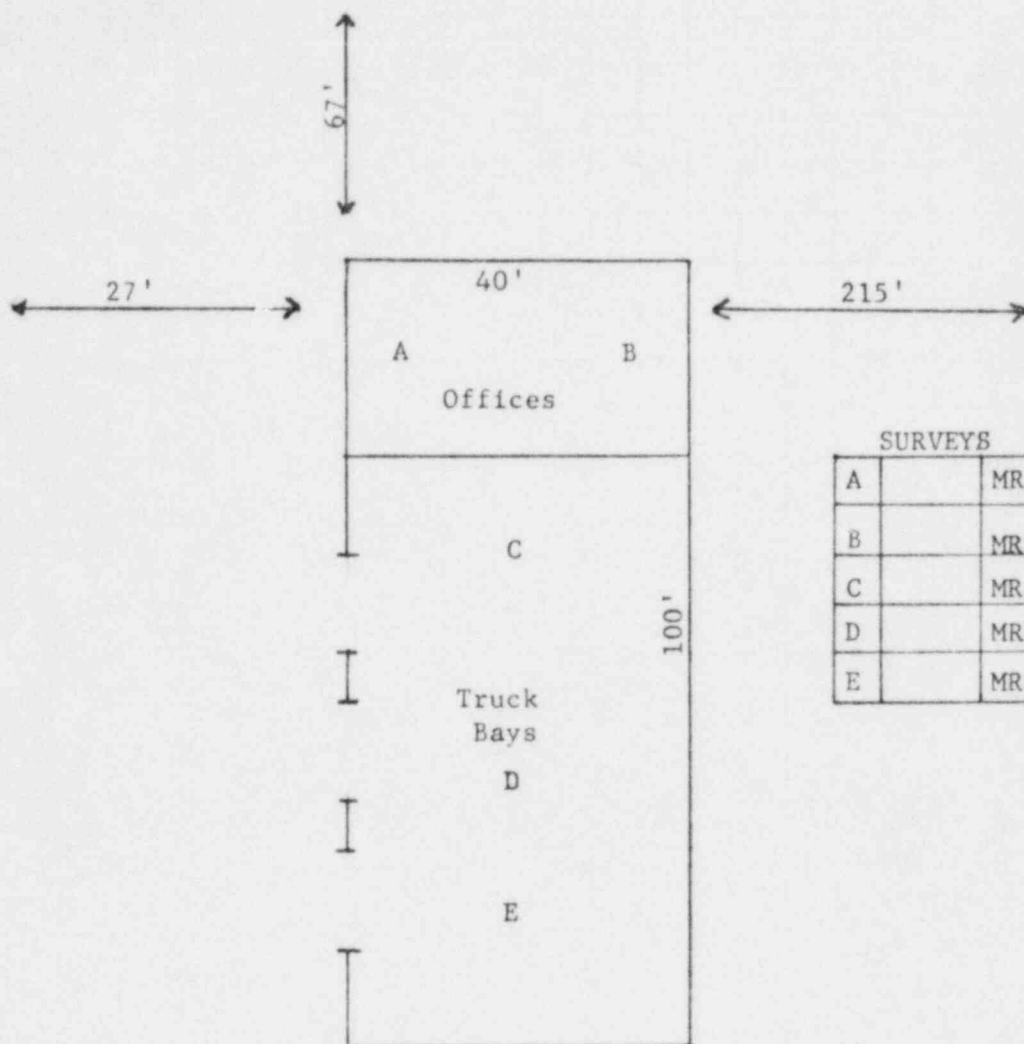


MIDCO, INC.
WOODWARD, OKLAHOMA

SECTION LINE ROAD

Trailer Park

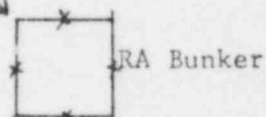
No Name for this Road



(Not drawn to scale)

SURVEYS

A		MR/HR
B		MR/HR
C		MR/HR
D		MR/HR
E		MR/HR



SURVEY METER ID:

Make: _____

Model: _____

Serial #: _____

Date of Calibration: _____

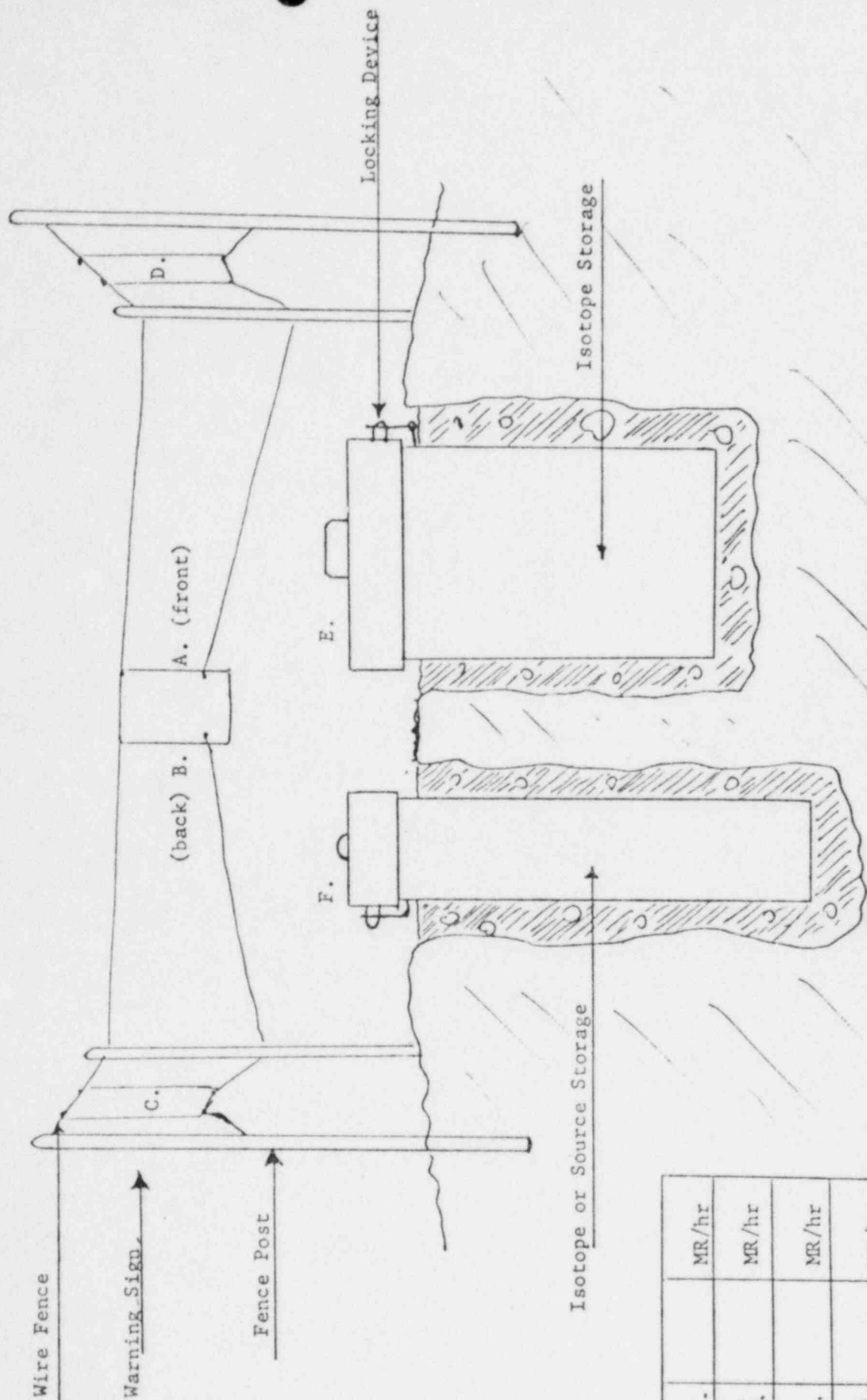
INSPECTED BY:

DATE: _____

Open Field

08154

MONTHLY BUNKER SURVEY



A.	MR/hr
B.	MR/hr
C.	MR/hr
D.	MR/hr
E.	MR/hr
F.	MR/hr

Survey Meter _____ Model _____

Serial Number _____

Calibration Date _____

Inspected By: _____

Date: _____

R E S U M E

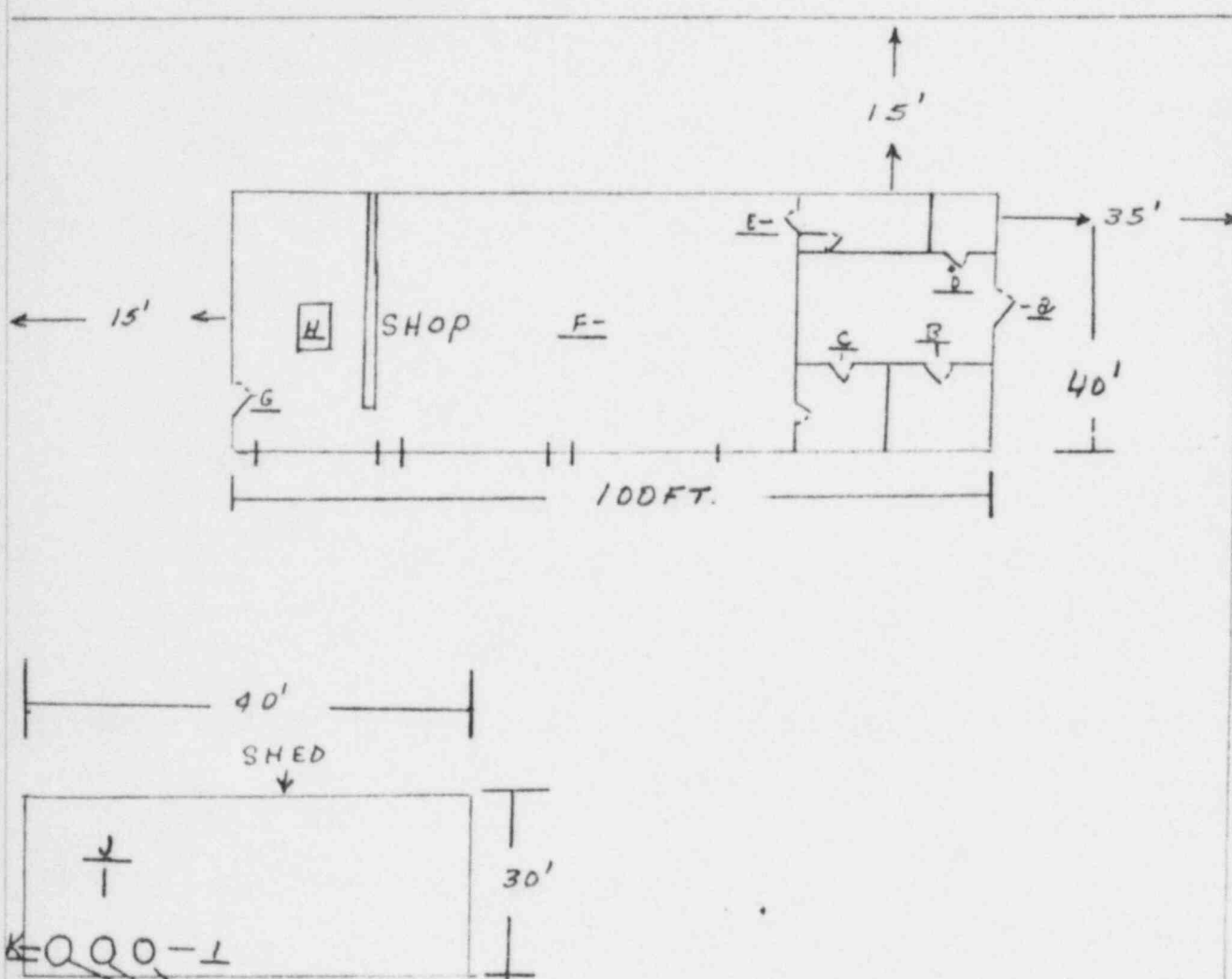
NAME: L. D. "Chuck" Robertson
RES. PHO.: (405) 691-3400
SOCIAL SECURITY NO.: 447-36-2937

- 1979 - 1980 -- Star-Jet Services, Inc., Okla. City, Okla.
Radiation Safety Officer. Used AmBe 241,
3 Curie sealed sources; Iodine 131 and Iridium
192 tracers. Received additional Radiation
Safety Training and D.O.T. training as it per-
tains to radioactive materials transportation.
- 1978 - 1979 -- Cardinal Surveys, Inc., Odessa, Texas.
Worked with I-131, SC-46, IR-192 in liquid and
solid forms. Tritium and Cesium sealed sources.
Attended Radiation Safety School given by Keith
Moon, Cardinal R.P.O.
- 1971 - 1978 -- Tracer Surveys, Inc., Odessa, Texas.
(Merged with Tom Hansen Company in 1976).
Served as Radiation Safety Officer from 1973 to
1978. Implemented radiation safety program in
use during this period. Extensive use of I-131,
IR-192, SC-46, IR-192 in liquid and solid form.
Also used AmBe and Cesium sealed sources. Attend-
ed schools given by Frank Malek.
- 1965 - 1971 -- Birdwell, Div.-S.S.C.
Used SC-46, SB-124, IR-192, Cobalt-60 and Lanthium
in liquid and solid forms. AmBe and Cesium sealed
sources. Also silver-110 and Cobalt-60. Attended
several radiation safety schools given by Bill
Frye, Birdwell R.S.O.
- 1960 - 1964 -- Pan Geo Atlas Corp., Woodward, Oklahoma.
Used all neutron sources in use during this time
along with Cobalt-60 and silver-110.



MID-CONTINENT WIRELINE SERVICES

22ND STREET



EASTERN AVE

AREAS $5\frac{1}{2}'' \times 4'$ 11.6# CSG. W/SEALED LOCKED LIDS, THESE WERE SURVEYED REMOVED AND INSTALLED AT NEW SHOP

A. .02 MR. G. .03 MR.
 B. .02 MR. H. .03 MR.
 C. .02 MR. J. .04 MR.
 D. .01 MR. J. .04 MR.
 E. .02 MR. K. .03 MR.
 F. .03 MR.

SURVEYED W/EON PSM 700
 CALIB. DATE 12/8/80
 SER. NO. 875274

