

CR 134289


CORRELATION OF
MISSIONS 191, 51M AND
HELICOPTER PHOTOGRAPHY

(NASA-CR-134289) CORRELATION OF MISSIONS 191, 51M AND HELICOPTER PHOTOGRAPHY (Lockheed Electronics Co.) 43 p HC \$3.75	N75-12279
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CORRELATION OF
MISSIONS 191, 51M AND
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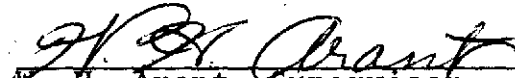
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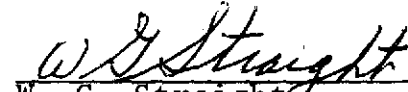
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Prepared Under Contract NAS 9-12200

for

Mapping Sciences Branch
Earth Observation Division

National Aeronautics and Space Administration
Manned Spacecraft Center
Houston, Texas

August 1972

EOD2876

PREFACE

This report was prepared by Lockheed Electronics Company, Inc., Houston Aerospace Systems Division, under Contract NAS 9-12200 in response to Job Order 75-815 issued by the Mapping Sciences Branch, Earth Observation Division, Manned Spacecraft Center, Houston, Texas.

Special acknowledgment is made to Frank J. Herbert of the Applications Office, Earth Observations Division, for providing the helicopter photography.

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1.0 INTRODUCTION

Mission 191 was flown on November 11, 1971; Mission 51M was flown on 11 and 12 November, 1971, and the helicopter photography was flown on 10 and 11 November, 1971.

The cameras correlated in this report are:

- Mission 191 - RC-8/4L with 6-inch-focal-length lens.
- Mission 51M - K-17 with 6-inch-focal-length lens.
- Helicopter Photography - Hand held Hasselblad with 40 mm-focal-length lens hand held Nikon with 35 mm focal-length lens.

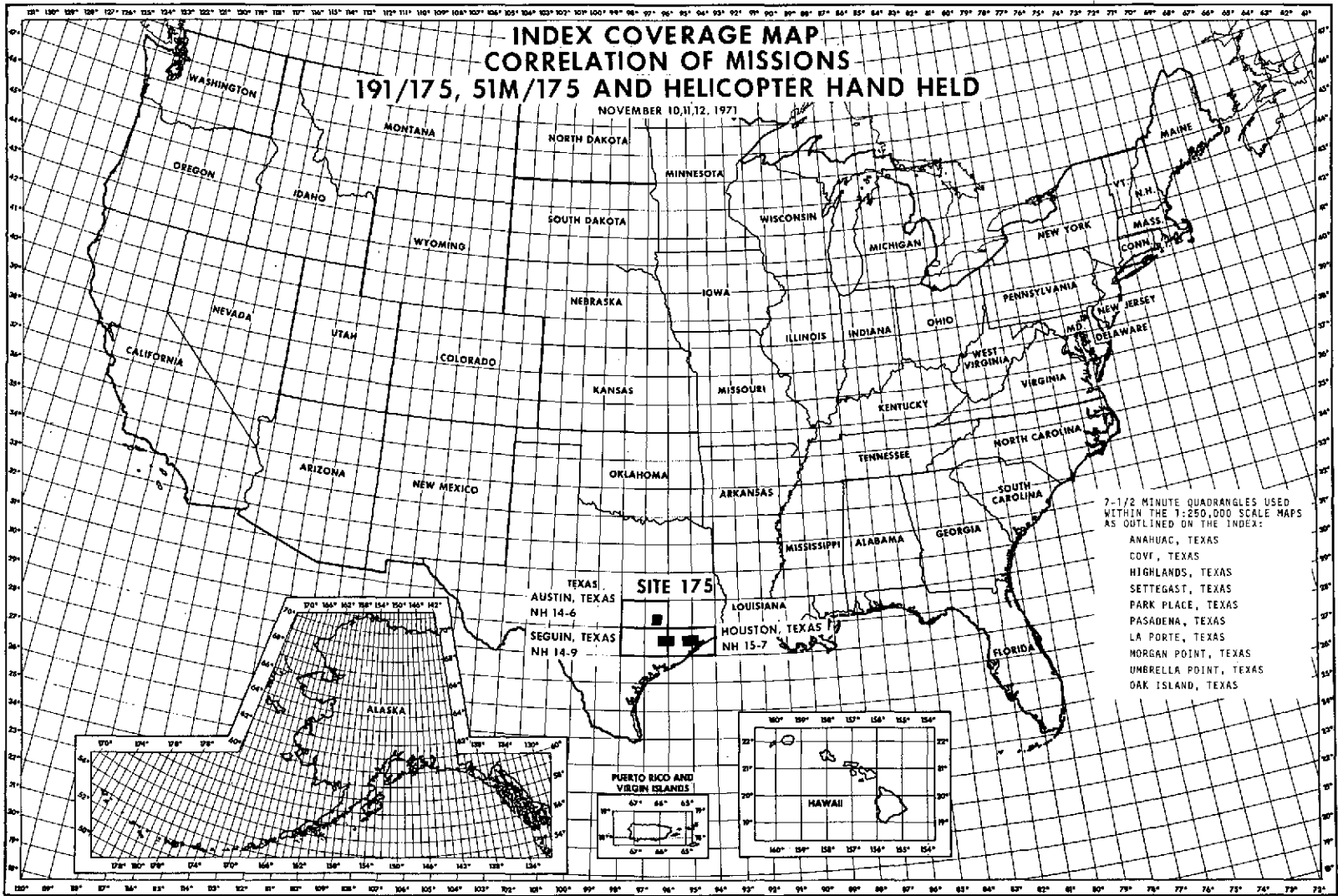
See the Cataloging and Indexing Reports of Missions 191 and 51M for the other sensors operated during the missions.

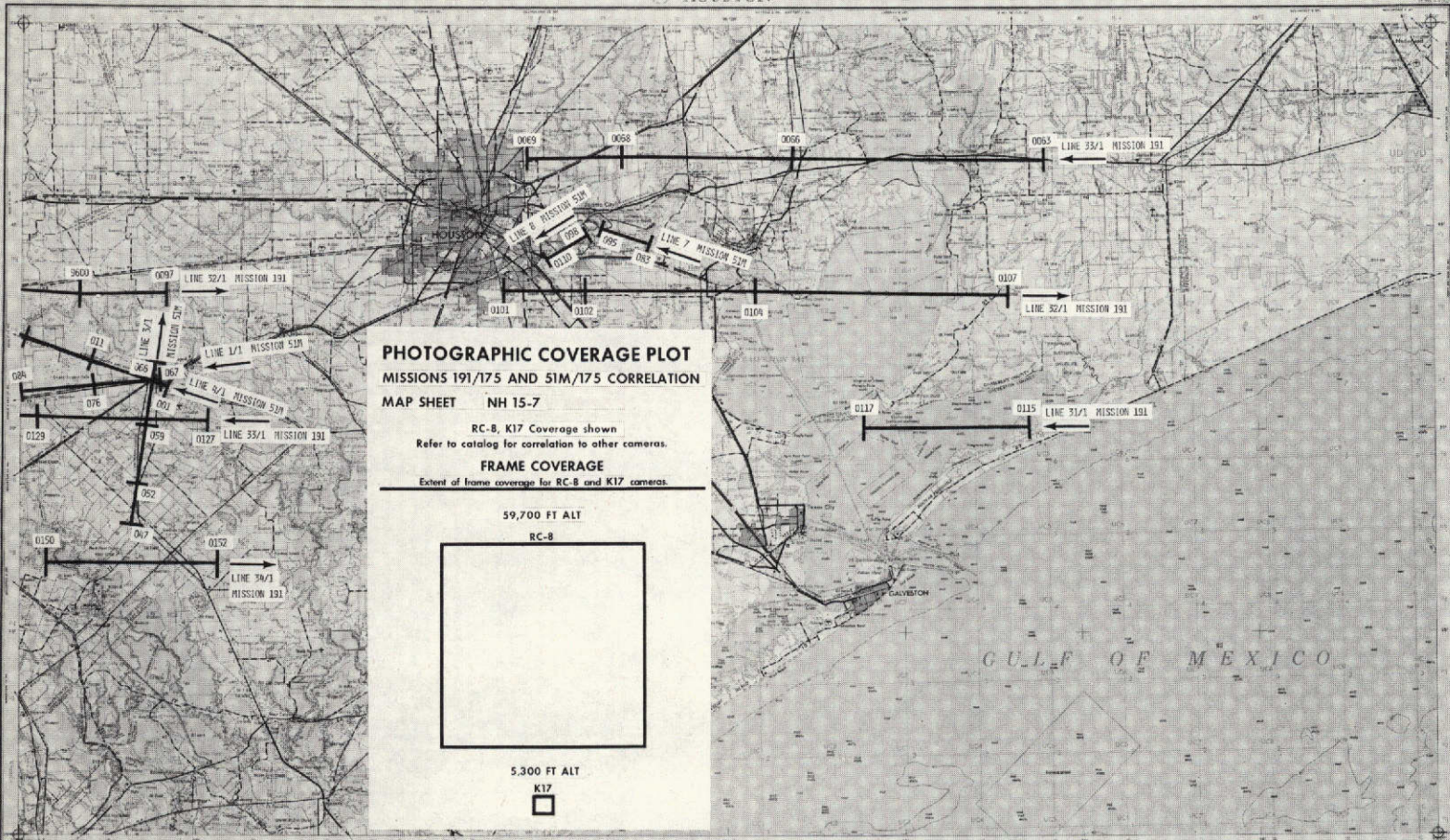
2.0 REPORT DESCRIPTION

This report is a correlation of Mission 51M photography (K-17) and the Helicopter Mission photography (Hasselblad and Nikon) to Mission 191 photography (RC-8/4L). The correlation is for three areas within Test Site 175. These areas are Rosenberg, Houston Ship Channel/Trinity Bay and the Sommerville Dam.

The report is presented in four sections. The first section is an index of the photography from Missions 191 and 51M that cover the three study areas within Test Site 175. The second section is the correlation of Missions 191 and 51M and the Helicopter mission over the Rosenberg area. Section number three is the correlation of the photography over the Houston Ship Channel/Trinity Bay area. The fourth section is the Sommerville Dam correlation.

CORRELATION, CATALOGUING
AND
INDEXING





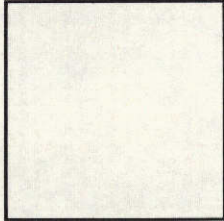
PHOTOGRAPHIC COVERAGE PLOT
MISSIONS 191/175 AND 51M/175 CORRELATION
 MAP SHEET NH 15-7

RC-8, K17 Coverage shown
 Refer to catalog for correlation to other cameras.

FRAME COVERAGE
 Extent of frame coverage for RC-8 and K17 cameras.

59,700 FT ALT

RC-8



5,300 FT ALT

K17



LOS ANGELES
 DALLAS
 GALVESTON

CUSTOMER SERVICE
 BETA SUPPLEMENTARY CONTROL AT 48 FOOT INTERVALS
 PHOTOGRAPHIC COVERAGE PLOT

HOUSTON TEXAS

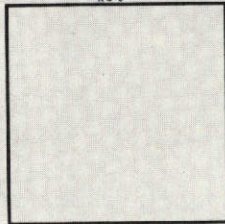
PHOTOGRAPHIC COVERAGE PLOT
MISSIONS 191/175 AND 51M/175 CORRELATION
MAP SHEET NH 14-9

RC-8, K17 Coverage shown
 Refer to catalog for correlation to other cameras.

FRAME COVERAGE
 Extent of frame coverage for RC-8 and K17 cameras.

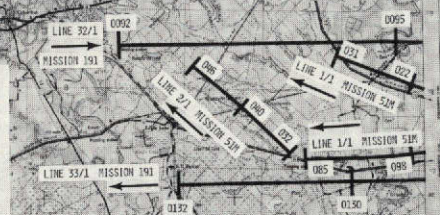
59,700 FT ALT

RC-8



5,300 FT ALT

K17



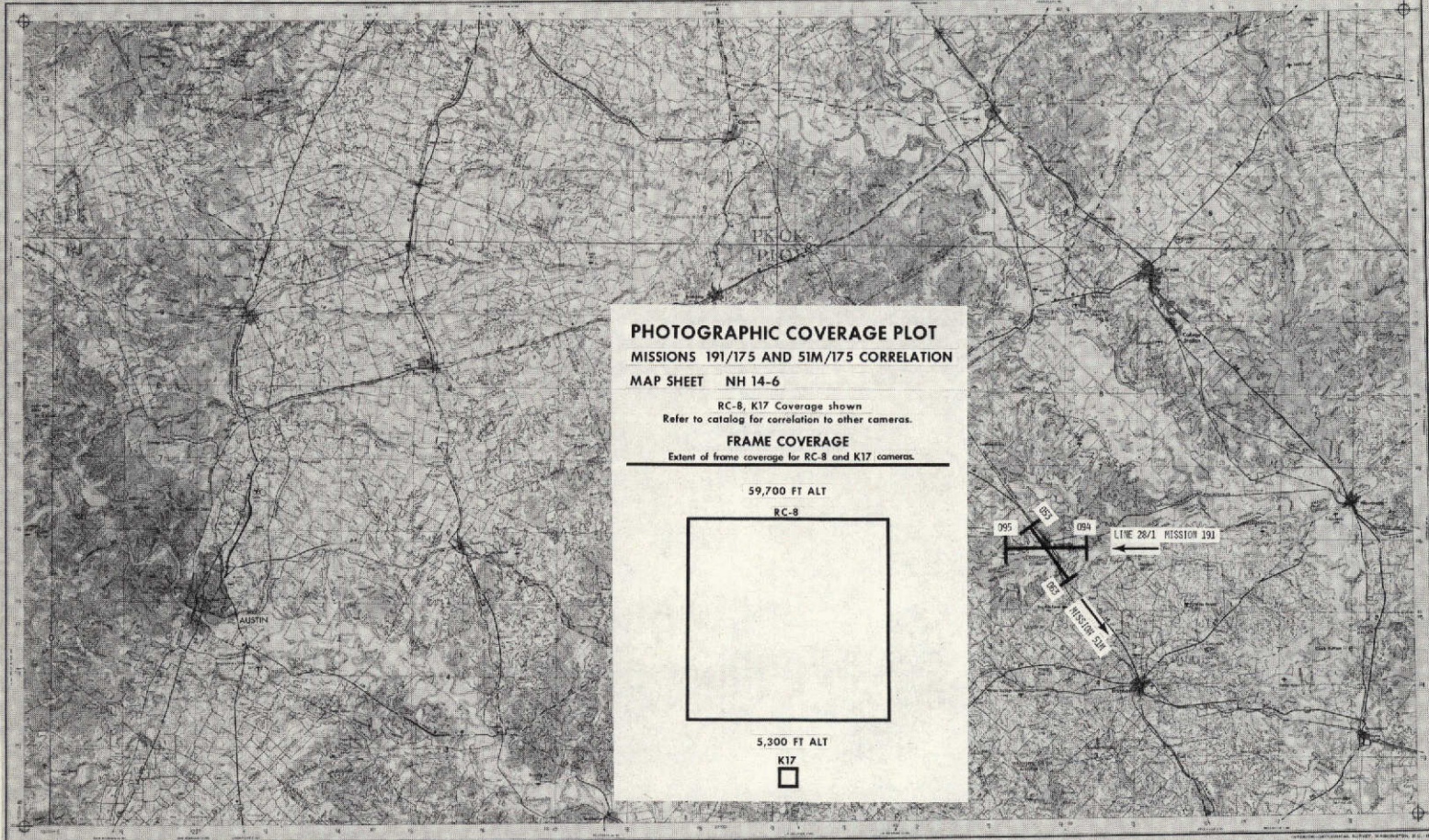
LEGEND
 SYMBOLS AND MEANINGS
 LOS ANGELES
 SAN ANTONIO
 SAN MARCOS
 SEGUIN
 WAXAHACHIE
 WYOMING

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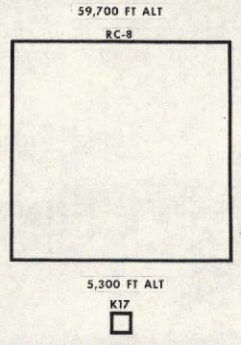


PHOTOGRAPHIC COVERAGE PLOT
MISSIONS 191/175 AND 51M/175 CORRELATION
MAP SHEET NH 14-6

RC-8, K17 Coverage shown
 Refer to catalog for correlation to other cameras.

FRAME COVERAGE

Extent of frame coverage for RC-8 and K17 cameras.



LOS ANGELES
 ANAHEIM
 COMBINA
 COLLECTION

Frame No.	Altitude	Time	Remarks
085	59,700	00:00	Start of Mission 191
084	59,700	00:05	
083	59,700	00:10	
082	59,700	00:15	
081	59,700	00:20	
080	59,700	00:25	End of Mission 191

CONTOUR INTERVAL: 10 FEET
 TRANSVERSE MERCATOR PROJECTION

Zone	Scale	Distortion
1	1:250,000	0.00000
2	1:250,000	0.00000
3	1:250,000	0.00000
4	1:250,000	0.00000
5	1:250,000	0.00000
6	1:250,000	0.00000
7	1:250,000	0.00000
8	1:250,000	0.00000
9	1:250,000	0.00000
10	1:250,000	0.00000

SEARCH EASEL FOR NH 14-6

Zone	Scale	Distortion
1	1:250,000	0.00000
2	1:250,000	0.00000
3	1:250,000	0.00000
4	1:250,000	0.00000
5	1:250,000	0.00000
6	1:250,000	0.00000
7	1:250,000	0.00000
8	1:250,000	0.00000
9	1:250,000	0.00000
10	1:250,000	0.00000

AUSTIN, TEXAS

Zone	Scale	Distortion
1	1:250,000	0.00000
2	1:250,000	0.00000
3	1:250,000	0.00000
4	1:250,000	0.00000
5	1:250,000	0.00000
6	1:250,000	0.00000
7	1:250,000	0.00000
8	1:250,000	0.00000
9	1:250,000	0.00000
10	1:250,000	0.00000

ROSENBERG

AREA

Lines 1 & 4 (51M)

ROSENBERG - RANGELAND AND RELATED GRAZING LAND
CORRELATION LOG

Date: November 10, 11, 12, 1971

Mx191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 70mm Hass Roll/Exp.	Helicopter 35mm Nikon Roll/Exp.						
10/0128	1/11114/001	-	-						
10/0128	1/11114/002	-	-						
10/0128	1/11114/003	-	-						
10/0128	1/11114/004	-	-						
10/0128	1/11114/005	-	-						
10/0128	1/11114/006	H1/30	NI/10						
10/0128	1/11114/006	H1/42	-						
10/0128	1/11114/006	H1/43	NI/18						
10/0128	1/11114/006	H2/35	N4/19						
10/0128	1/11114/008	H1/31	NI/11						
10/0128	1/11114/008	H1/32	NI/12						
10/0128	1/11114/008	H1/36	NI/11						
10/0128	1/11114/008	H2/33	N4/17						
10/0128	1/11114/008	H2/34	-						
10/0128	1/11114/009	-	-						
10/0128	1/11114/010	H1/33	NI/13						
10/0128	1/1114/010	H1/32	NI/15						
10/0128	1/1114/010	H1/35	NI/15						
10/0128	1/1114/010	H1/38							
10/0128	1/1114/010	H1/39	NI/16						
10/0128	1/1114/010	H2/31	N4/15						
10/0128	1/1114/010	H2/32							
10/0128	1/11114/010	H2/41	N5/5						

ROSENBERG AREA

Mx 191/175 RC-8/4L Roll/Exp.	Mx 51M/175 K 17 Roll/Exp.	Helicopter 70 mm Hass. Roll/Exp.	Helicopter 35 mm Nikon Roll/Exp.						
10/0128	1/11114/010	H2/42	N5/6						
10/0128	1/11114/010	-	N1/14*						
10/0128	1/11114/012	-	N5/7*						
10/0128	1/11114/012	-	N5/8*						
10/0128	1/11114/012	-	N5/9*						
10/0128	1/11114/013	H1/40	-						
10/0128	1/11114/013	H1/41	-						
10/0128	1/11114/013	H1/48	-						
10/0128	1/11114/013	H1/49	-						
10/0128	1/11114/013	H1/52	-						
10/0128	1/11114/014	H2/48	N5/12						
10/0128	1/11114/014	H2/51	N5/13						
10/0128	1/11114/014	-	N5/15						
10/0128	1/11114/014	H2/52	N5/16						
10/0128	1/11114/014	H2/52	N5/17						
10/0128	1/11114/014	-	N5/10						
10/0128	1/11114/014	-	N5/11						
10/0128	1/11114/014	-	N5/18						
10/0128	1/11114/015	-	-						
10/0128	1/11114/016	-	N5/15*						
10/0128	1/11114/076	H1/20	N2/21						
10/0128	1/11114/076	H1/21	-						
10/0128	1/11114/076	H1/26	N1/5						
10/0128	1/11114/076	-	N1/6*						
10/0128	1/11114/076	H1/27	N1/5						

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ROSENBERG AREA

Mxl91/175 RC-8/4L Roll/Exp.	Mx51M/175 K-17 Roll/Exp.	Helicopter 70 mm Hass Roll/Exp.	Helicopter 35 mm Nikon Roll/Exp.						
10/0128	1/11114/076	H1/27	N1/6						
10/0128	1/11114/076	H1/28	N1/1						
10/0128	1/11114/076	H1/28	N1/2						
10/0128	1/11114/076	H1/29	N2/22						
10/0128	1/11114/076	-	N2/23						
10/0128	1/11114/076	H2/15	N3/17						
10/0128	1/11114/076	H2/16	N3/18						
10/0128	1/11114/076	H2/17	N4/2						
10/0128	1/11114/076	H2/18	N4/2						
10/0128	1/11114/076	H2/18	N4/3						
10/0128	1/11114/076	H2/18	N4/4						
10/0128	1/11114/076	H2/18	N4/5						
10/0128	1/11114/076	H2/18	N4/6						
10/0128	1/11114/078	H1/12	N2/13						
10/0128	1/11114/078	H1/12	N2/20						
10/0128	1/11114/078	H1/13	N2/18						
10/0128	1/11114/078	H1/13	N2/19						
10/0128	1/11114/078	H1/14	N2/18						
10/0128	1/11114/078	H1/14	N2/19						
10/0128	1/11114/078	H1/15	N2/16						
10/0128	1/11114/078	H1/15	N2/17						
10/0128	1/11114/078	H1/16	N2/19						
10/0128	1/11114/078	H1/17	N2/19						
10/0128	1/11114/078	H1/18	N2/19						
10/0128	1/11114/078	H1/19	N2/20						

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ROSENBERG AREA

191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 70 MM/Hass Roll/Exp.	Helicopter 35 MM Nikon Roll/Exp.						
10/0128	1/11114/078	H1/22							
10/0128	1/11114/078	H1/24	N1/1						
10/0128	1/11114/078	H1/25	N1/1						
10/0128	1/11114/078	H1/28	N1/2						
10/0128	1/11114/078	H2/13	N3/16						
10/0128	1/11114/078	H2/13	N4/11						
10/0128	1/11114/078	H2/14	N3/16						
10/0128	1/11114/078	H2/14	N4/11						
10/0128	1/11114/078	H2/23	-						
10/0128	1/11114/078	H2/24	N4/8						
10/0128	1/11114/078	H2/25	N4/8						
10/0128	1/11114/078	H2/27	N3/16						
10/0128	1/11114/078	H2/27	N4/11						
10/0128	1/11114/078	H2/28	N3/16						
10/0128	1/11114/078	H2/28	N4/11						
10/0128	1/11114/078	-	N2/14						
10/0128	1/11114/078	-	N2/15						
10/0128	1/11114/078	-	N3/15						
10/0128	1/11114/078	-	N4/7						
10/0128	1/11114/078	-	N4/9						
10/0128	1/11114/078	-	N4/10						
10/0128	1/11114/078	-	N4/12						
10/0128	1/11114/078	-	N4/13						
10/0128	1/11114/080	H1/4	N2/2						
-	-	-	N2/3	*					

12

ROSENBERG AREA

191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 70 mm Hass Roll/Exp.	Helicopter 35 mm Nikon Roll/Exp.						
10/0128	1/11114/080	H1/2	-						
10/0128	1/11114/080	H1/3	N2/5						
10/0128	1/11114/080	H1/4	N2/5						
10/0128	1/11114/080	H1/6	-						
10/0128	1/11114/080	H1/7	-						
10/0128	1/11114/080	H1/8	N2/6						
10/0128	1/11114/080	H1/8	N2/7						
10/0128	1/11114/080	H1/8	N2/8						
10/0128	1/11114/080	H1/10	N2/11						
10/0128	1/11114/080	H2/1	N3/2						
10/0128	1/11114/080	H2/2	N3/3						
10/0128	1/11114/080	H2/3	-						
10/0128	1/11114/080	H2/4	N3/6						
10/0128	1/11114/080	H2/58	-						
10/0128	1/11114/080	-	N2/4						
10/0128	1/11114/080	-	N3/4						
10/0128	1/11114/080	-	N3/5						
10/0128	1/11114/080	-	N4/14						
10/0128	1/11114/080	-	N5/22						
10/0128	1/11114/082	H2/5	-						
10/0128	1/11114/082	H2/6	-						
10/0128	1/11114/082	H2/8	N3/10						
10/0128	1/11114/082	H2/8	N3/11						
10/0128	1/11114/082	H2/9	N3/10						
10/0128	1/11114/082	H2/9	N3/11						

13

ROSENBERG AREA

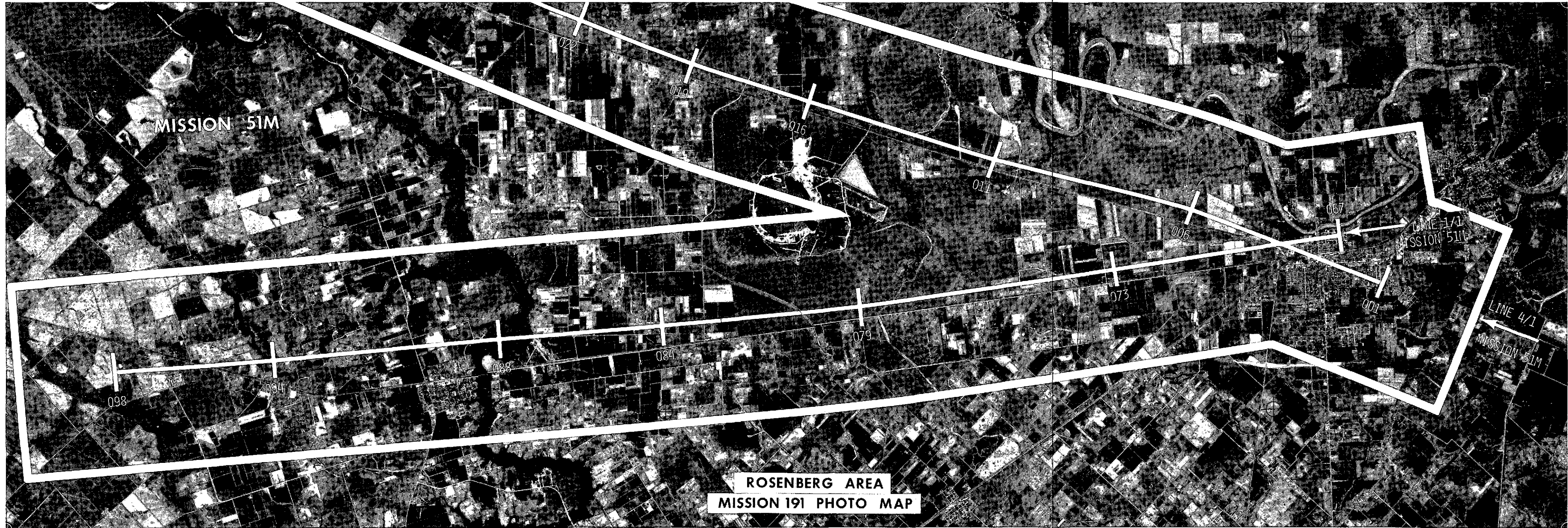
191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 70 MM Hass Roll/Exp.	Helicopter 35 MM Nikon Roll/Exp.						
10/0128	1/11114/082	H1/5	N2/9						
10/0128	1/11114/082	-	N3/7						
10/0128	1/11114/082	-	N3/8						
10/0128	1/11114/082	-	N3/9						
10/0128	1/11114/082	-	N3/12						
10/0128	1/11114/082	-	N3/13						
10/0128	1/11114/082	-	-						
10/0128	1/11114/082	-	-						
10/0128	1/11114/082	H1/9	N2/6						
10/0128	1/11114/082	H1/11	N2/12						
10/0128	1/11114/082	H2/11	N3/13						
10/0128	1/11114/082	H2/12	N3/14						
10/0128	1/11114/082	H2/29	-						
10/0128	1/11114/082	H2/30	-						
10/0128	1/11114/082	H2/36	N4/20						
10/0128	1/11114/082	H2/37	N4/21						
10/0128	1/11114/082	H2/38	-						
10/0128	1/11114/082	H2/39	-						
10/0128	1/11114/082	H2/40	N4/4						
10/0128	1/11114/082	-	N1/7						
10/0128	1/11114/082	-	N1/8						
10/0128	1/11114/082	-	N1/9						
10/0128	1/11114/082	-	N1/17						
10/0128	1/11114/082	-	N1/19						
10/0128	1/11114/082	-	N1/20						

14

REPRODUCIBILITY OF THE ORIGINAL PAGE IS POOR

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FOLDOUT FRAME

1

FOLDOUT FRAME

2

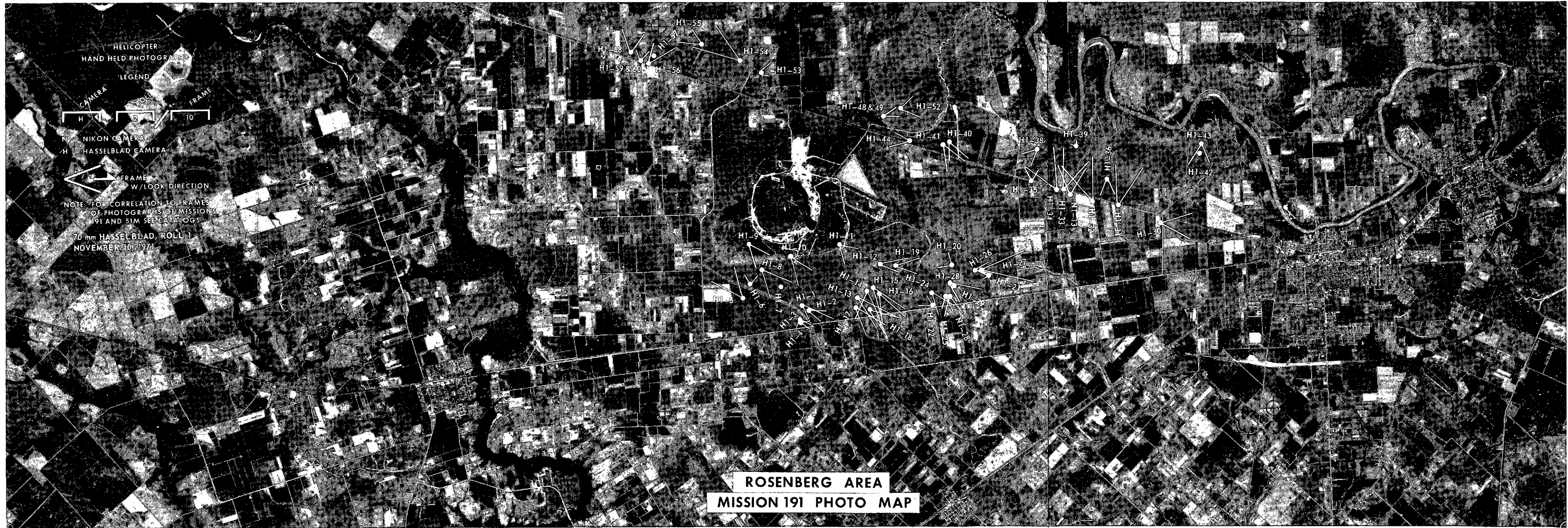
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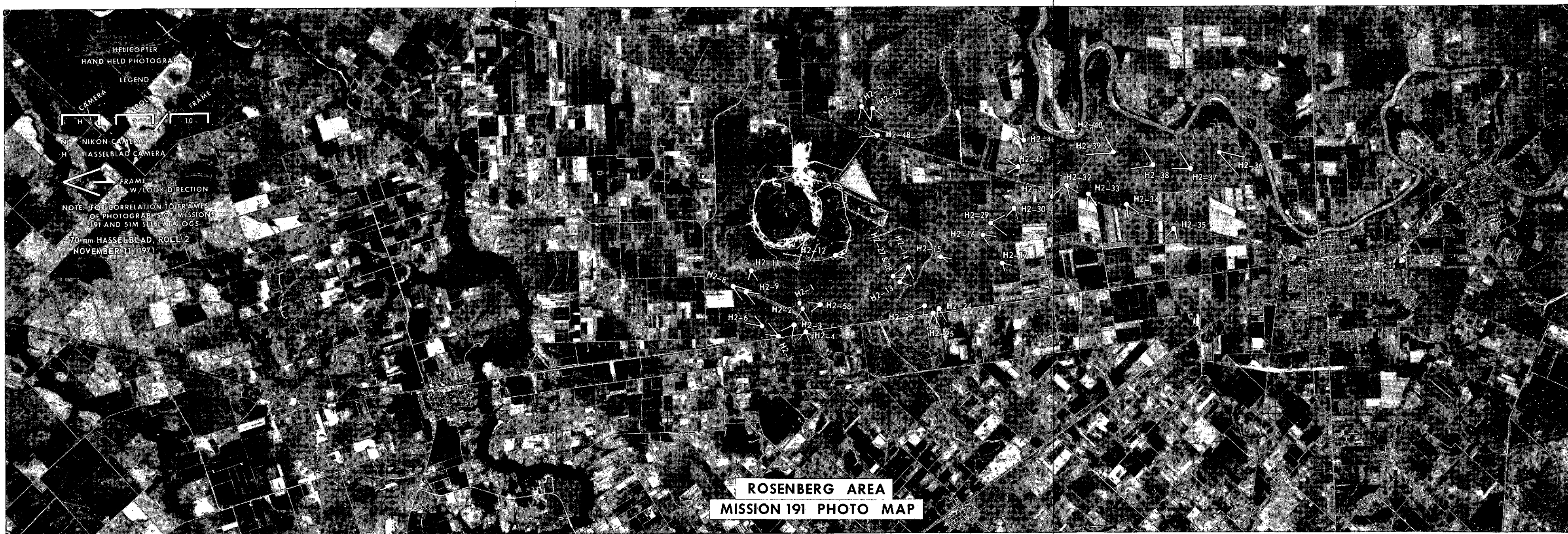


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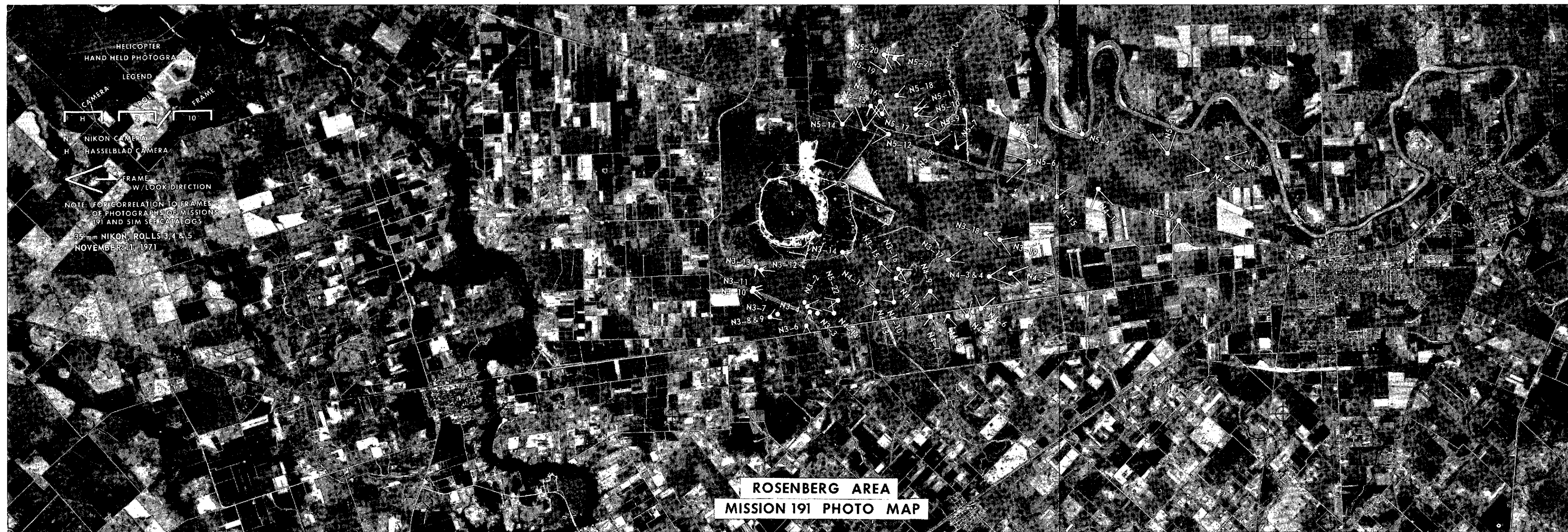
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1

2

3



FOLDOUT FRAME

1

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2

FOLDOUT FRAME

3

HOUSTON SHIP CHANNEL
AND TRINITY BAY
AREA
Lines 7 & 8 (51M)

HOUSTON SHIP CHANNEL AND
TRINITY BAY CORRELATION LOG

Date: November 10, 11, 12, 1971

191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp	Helicopter 35 mm Nikon Roll/Exp							
10/0064	-	N9/5							
10/0064	-	N9/6							
10/0064	-	N9/7							
10/0064	-	N9/8							
10/0064	-	N9/9							
10/0064	-	N9/10							
10/0064	-	N9/11							
10/0064	-	N9/13							
10/0064	-	N9/15							
10/0064	-	N11/9							
10/0064	-	N11/10							
10/0064	-	N11/11							
10/0064	-	N11/12							
10/0064	-	N11/13							
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10/0064	-	N11/15							
10/0064	-	N11/16							
10/0064	-	N11/17							
10/0064	-	N11/18							
10/0064	-	N11/20							
10/0064	-	N11/21							
10/0065	-	N6/14							
10/0065	-	N6/15							
10/0065	-	N6/16							
10/0065	-	N6/17							

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HOUSTON SHIP CHANNEL AND
TRINITY BAY CORRELATION LOG

Date: November 10, 11, 12, 1971

191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 35 mm Nikon Roll/Exp.							
10/0065	-	N6/18							
10/0065	-	N9/12							
10/0065	-	N9/17							
10/0066	-	-							
10/0067	-	N6/2							
10/0068	-	N7/17							
10/0069	-	N7/18							
10/0101	1/11124/110	-							
10/0101	-	N7/15							
10/0102	1/11124/094	N7/1							
10/0102	1/11124/095	N7/2							
10/0102	2/11124/095	N7/3							
10/0102	2/11124/095	N7/4							
10/0102	2/11124/098	N7/5							
10/0102	2/11124/098	N7/6							
10/0102	2/11124/098	N7/7							
10/0102	2/11124/099	-							
10/0102	2/11124/100	-							
10/0102	2/11124/101	-							
10/0102	2/11124/102	N7/8							
10/0102	2/11124/102	N7/9							
10/0102	2/11124/102	N7/10							
10/0102	2/11124/103	N8/11							
10/0102	2/11124/104	-							
10/0102	2/11124/105	-							

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HOUSTON SHIP CHANNEL AND
TRINITY BAY CORRELATION LOG

Date: November 10, 11, 12, 1971

191/175 RC- 8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 35mm Nikon Roll/Exp.							
10/0103	2/11124/106	-							
10/0103	2/11124/107	N7/13							
10/0103	2/11124/107	N7/14							
10/0103	2/11124/108	-							
10/0103	2/11124/083	-							
10/0103	2/11124/084	-							
10/0103	2/11124/085	-							
10/0103	-	N6/3							
10/0103	-	N6/4							
10/0104	-	N6/5							
10/0104	-	N6/6							
10/0105	-	N6/9							
10/0105	-	N6/10							
10/0105	-	N6/11							
10/0105	-	N6/12							
10/0105	-	N6/13							
10/0106	-	N8/4							
10/0106	-	N8/5							
10/0106	-	N8/6							
10/0106	-	N8/7							
10/0106	-	N8/8							
10/0106	-	N8/9							
10/0106	-	N8/10							
10/0106	-	N8/11							
10/0106	-	N8/12							

24

HOUSTON SHIP CHANNEL AND
TRINITY BAY CORRELATION LOG

Date: November 10, 11, 12, 1971

191/175 RC-8/4L Roll/Exp.	51M/175 K-17 Roll/Exp.	Helicopter 35 mm Nikon Roll/Exp.							
10/0106	-	N8/13							
10/0106	-	N8/14							
10/0106	-	N8/15							
10/0106	-	N8/16							
10/0106	-	N8/17							
10/0106	-	N8/18							
10/0106	-	N8/19							
10/0106	-	N8/20							
10/0106	-	N11/6							
10/0106	-	N11/7							
10/0106	-	N11/8							
-	-	N6/1*							
-	-	N6/7*							
-	-	N6/8*							
-	-	N6/14*							
-	-	N6/15*							
-	-	N6/16*							
-	-	N6/17*							
-	-	N6/18*							
-	-	N6/19*							
-	-	N6/20*							
-	-	N7/10*							
-	-	N7/11*							
-	-	N7/12*							
-	-	N7/16*							

25

HOUSTON SHIP CHANNEL
TRINITY BAY CORRELATION LOG

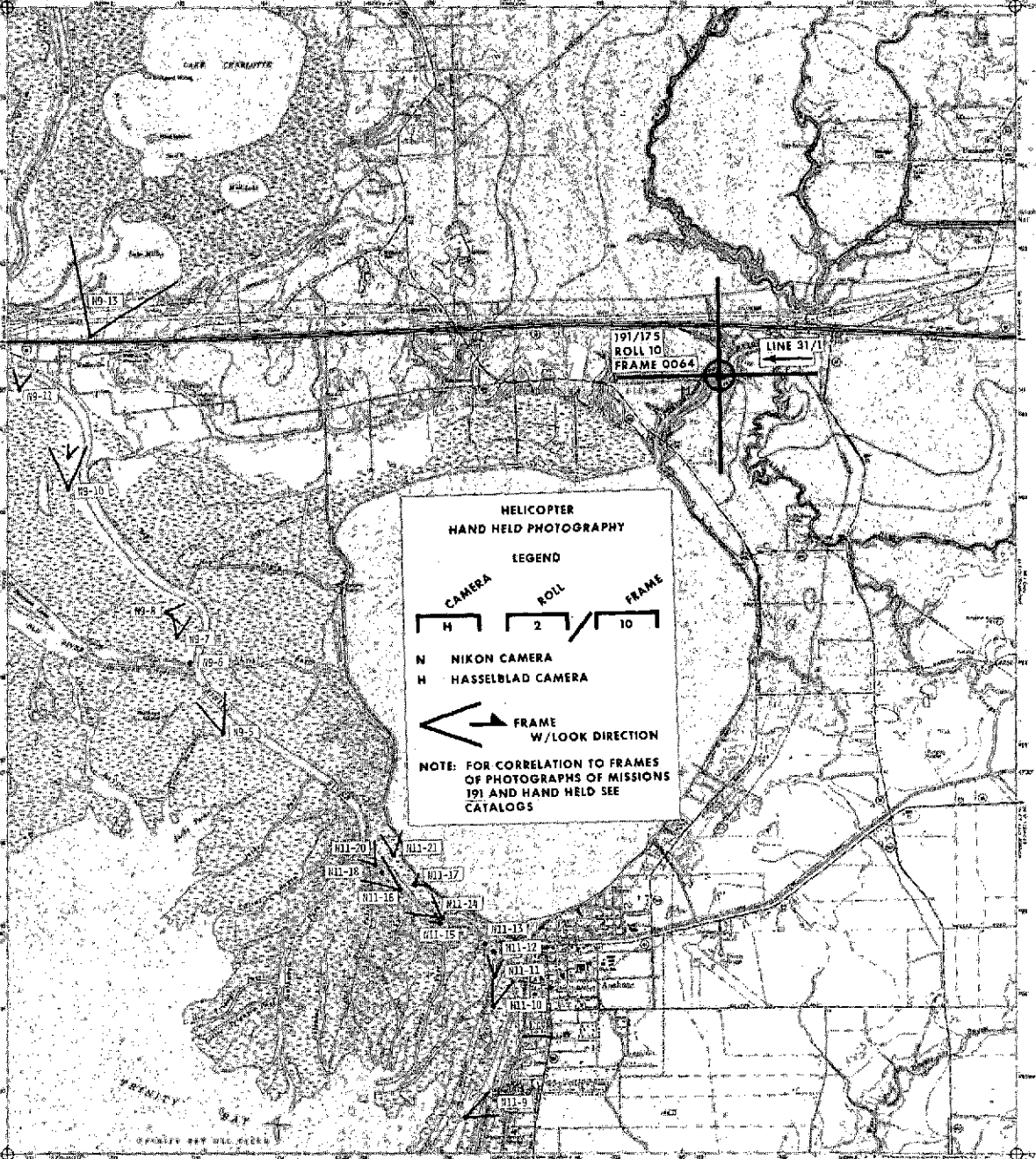
Date: November 10, 11, 12, 1971

191/175 RC-8/42 Roll/Exp	51M/175 K-17 Roll/Exp	Helicopter 35mm Nikon Roll/Exp.							
-	-	N8/1*							
-	-	N8/2*							
-	-	N8/3*							
-	-	N8/4*							
-	-	N8/5*							
-	-	N8/6*							
-	-	N8/7*							
-	-	N8/8*							
-	-	N8/9*							
-	-	N9/1*							
-	-	-							
-	-	N9/2*							
-	-	N9/3*							
-	-	N9/4*							
-	-	N9/14*							
-	-	N9/16*							
-	-	N11/1*							
-	-	N11/2*							
-	-	N11/3*							
-	-	N11/4*							
-	-	N11/5*							
-	-	N11/19*							

26

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SELMER-LEWISVILLE CO.
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CAMERA ROLL FRAME

┌───┬───┬───┐

└─H─┘ └─2─┘ └─10─┘

N NIKON CAMERA
H HASSELBLAD CAMERA

← FRAME
W/LOOK DIRECTION

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OF PHOTOGRAPHS OF MISSIONS
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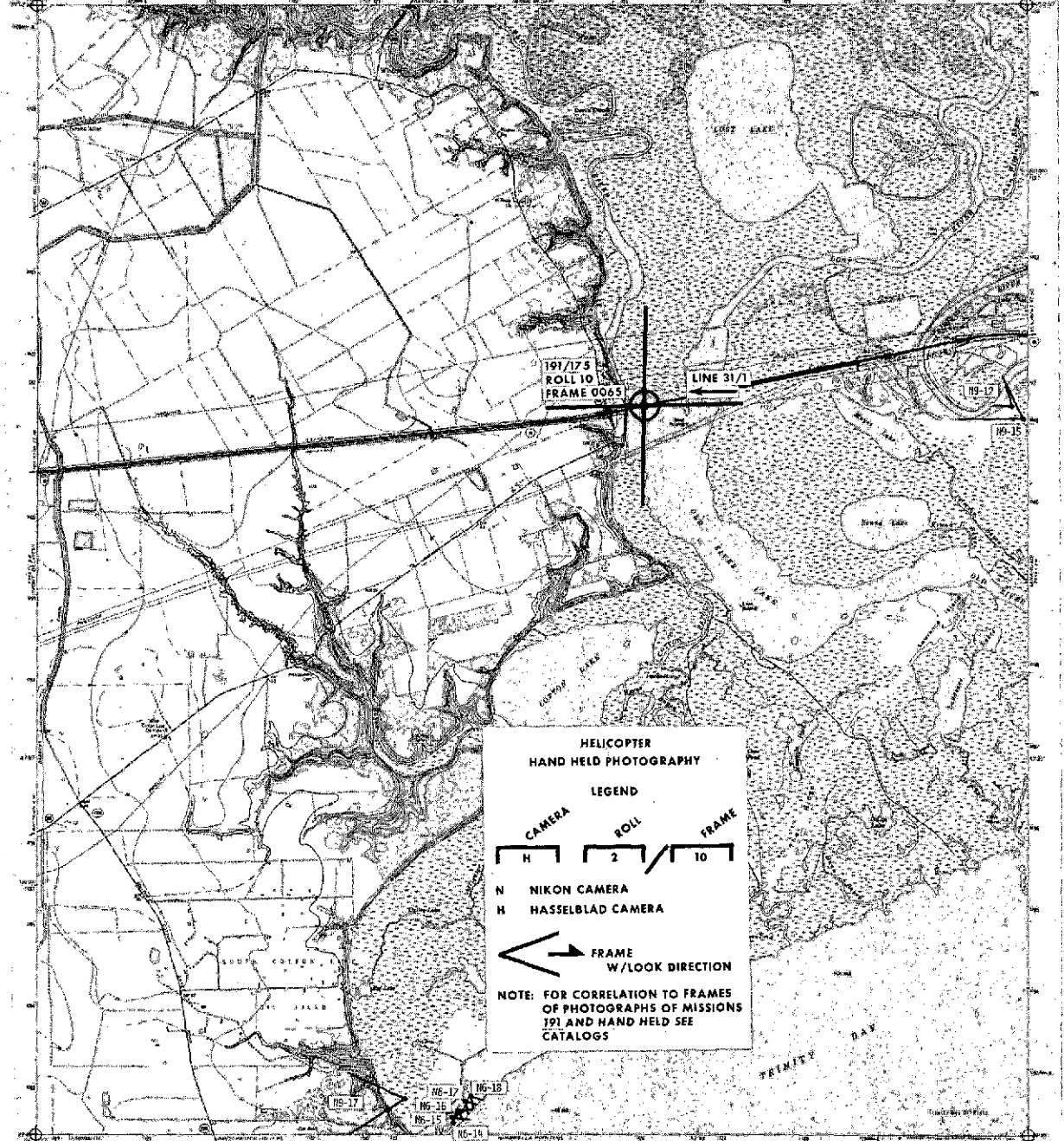
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April 1957
1960
425-024-1-1-60

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

COVE QUADRANGLE
TOWNSHIP 10N RANGE 10W
25 MINUTE PLATS (CONFORMED)



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1967. 10N 10W. 25 Min. Plat. 10N 10W. 25 Min. Plat. 10N 10W.

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ROAD CLASSIFICATION

Major Road Light Road

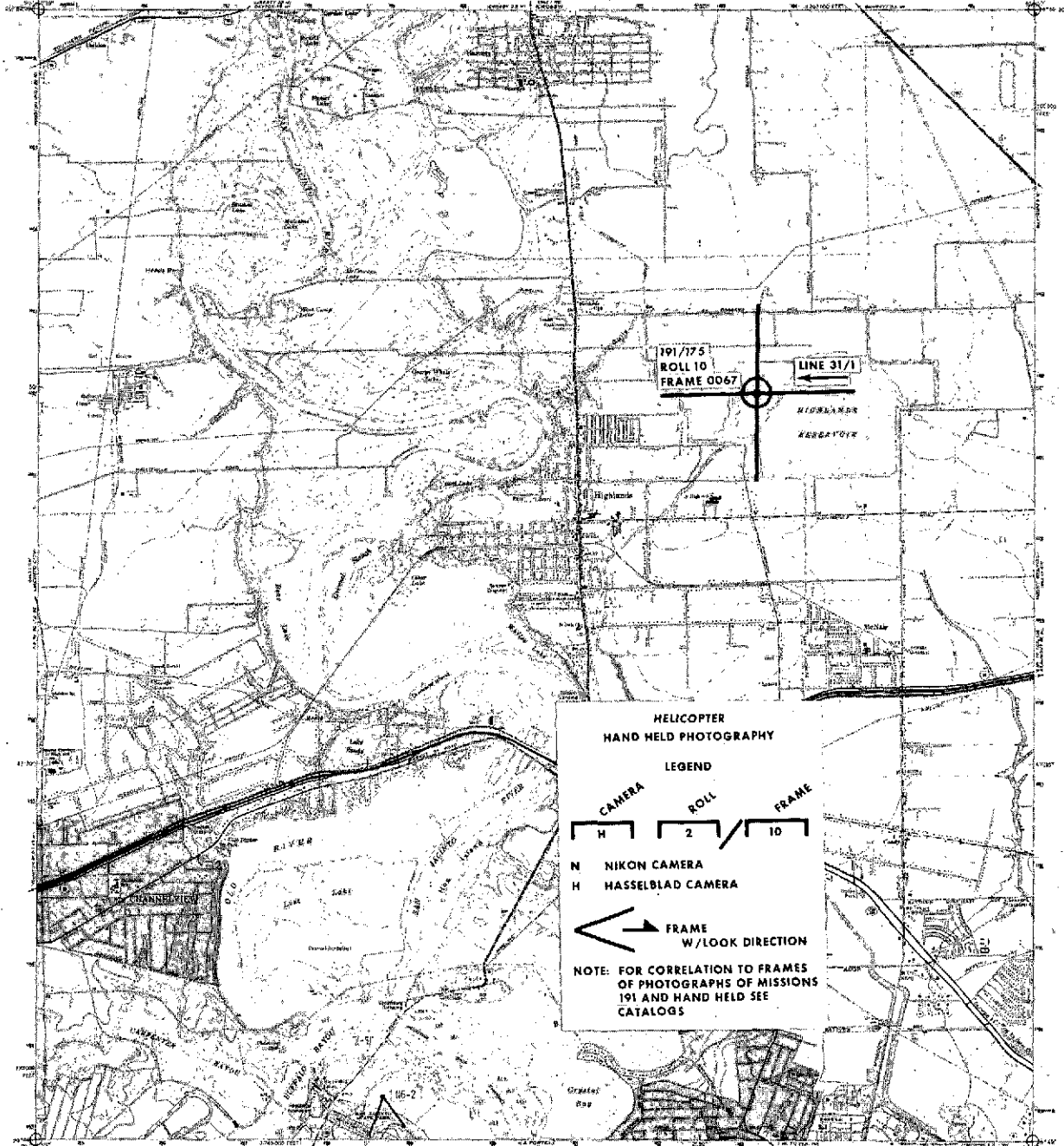
Minor Road Unimproved Road

Interstate Road State Road

COVE TEX
 10N 10W 25 MIN. PLAT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

HIGHLANDS QUADRANGLE
TEXAS-HARRIS CO.
2 29 MINUTE SERIES (TOPOGRAPHIC)



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CAMERA ROLL FRAME

H 2 10

N NIKON CAMERA
H HASSELBLAD CAMERA

← FRAME
W/LOOK DIRECTION

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ROAD CLASSIFICATION
Primary Secondary
Tertiary Quaternary
Quinary Sextenary
Septenary Octonary
Nonary Decenary

Highway Interstate
State U.S. State

Highway Interstate
State U.S. State

**HIGHLANDS
QUADRANGLE**

1962

Scale 1:50,000

UNITED STATES
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SETTECAST QUADRANGLE
TEXAS—HARRIS CO.
15 MINUTE GEOMORPHIC (TOPOGRAPHIC)



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LEGEND

CAMERA ROLL FRAME

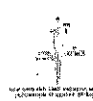
H 2 10

N NIKON CAMERA
H HASSELBLAD CAMERA

← FRAME
W/LOOK DIRECTION

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CONTOUR INTERVAL 5 FEET
UNLESS OTHERWISE NOTED
ELEVATION IN FEET
ELEVATION IN FEET
ELEVATION IN FEET



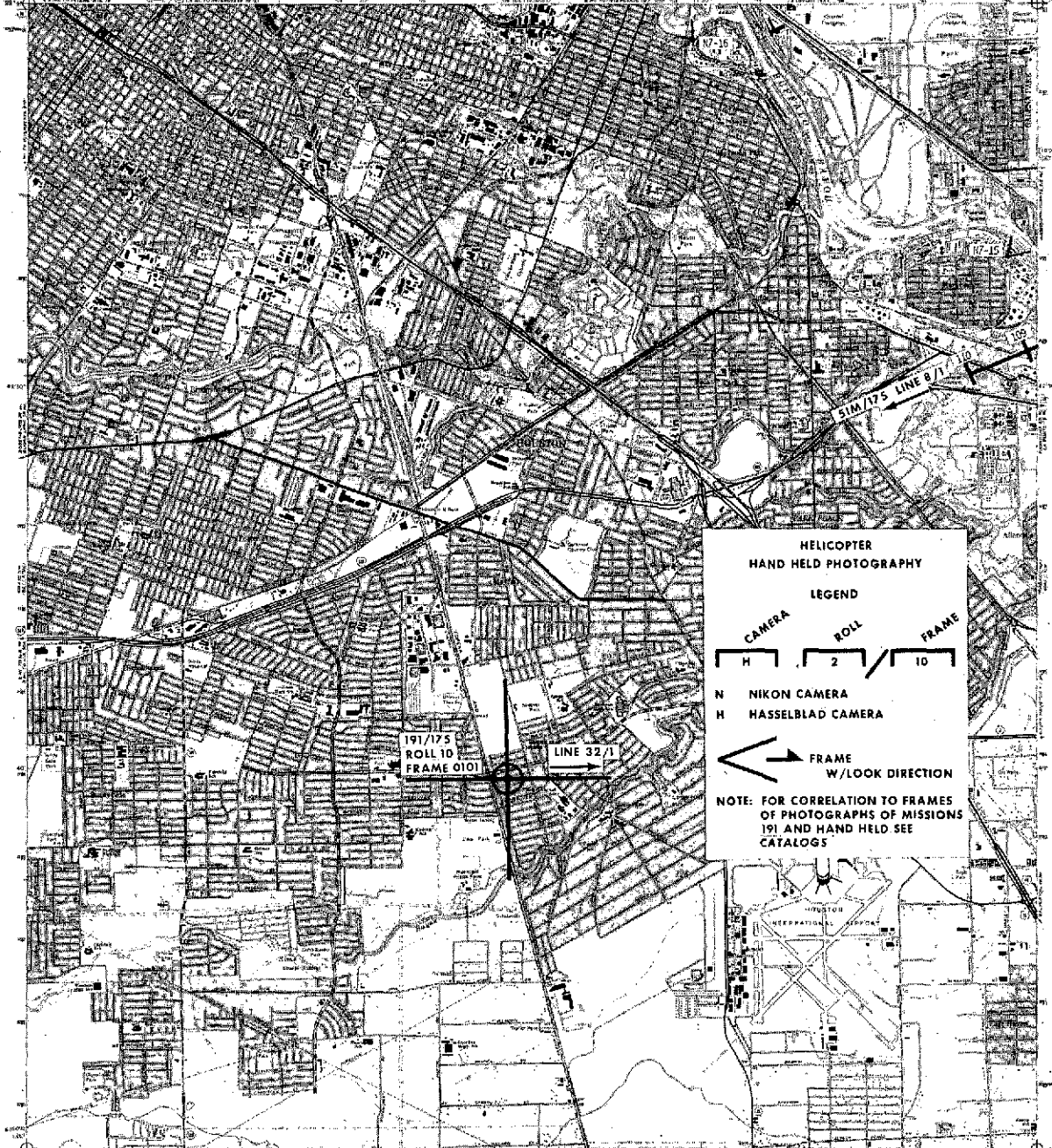
ROAD CLASSIFICATION
14400-000 Legend
14400-000 Legend
14400-000 Legend
14400-000 Legend

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SETTECAST, TRK
1964-1965
1965

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7.5-MINUTE SERIES (TOPOGRAPHIC)



HELICOPTER
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LEGEND

CAMERA ROLL FRAME

H 2 10

N NIKON CAMERA
H HASSELBLAD CAMERA

← FRAME
W/LOOK DIRECTION

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OF PHOTOGRAPHS OF MISSIONS
191 AND HAND HELD SEE
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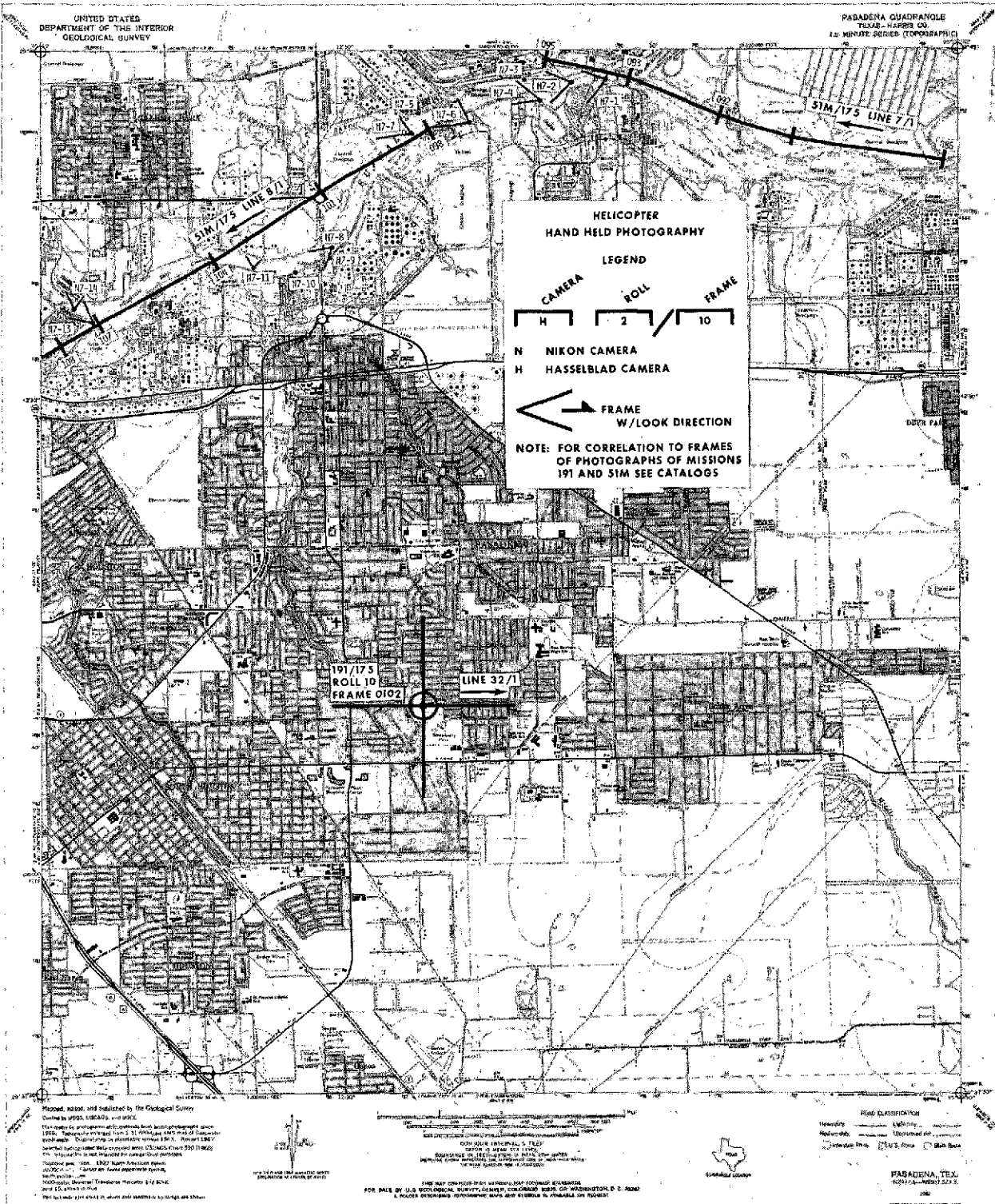
NON-COOPERATION

Uncooperative Uncooperative Uncooperative

Uncooperative Uncooperative Uncooperative

UNCOOPERATIVE

PARK PLACE, TEX.
ROLL 10—FRAME 0101
1967
100-2 (REV. 1-27-70)



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LEGEND**

CAMERA ROLL FRAME

N NIKON CAMERA
H HASSELBLAD CAMERA

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191 AND 51M SEE CATALOGS

191/175
ROLL 10
FRAME 0102

LINE 32/1

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now. It is a map of the ground as it was in 1958. It is not a true map of
the ground as it is now. It is a map of the ground as it was in 1958.

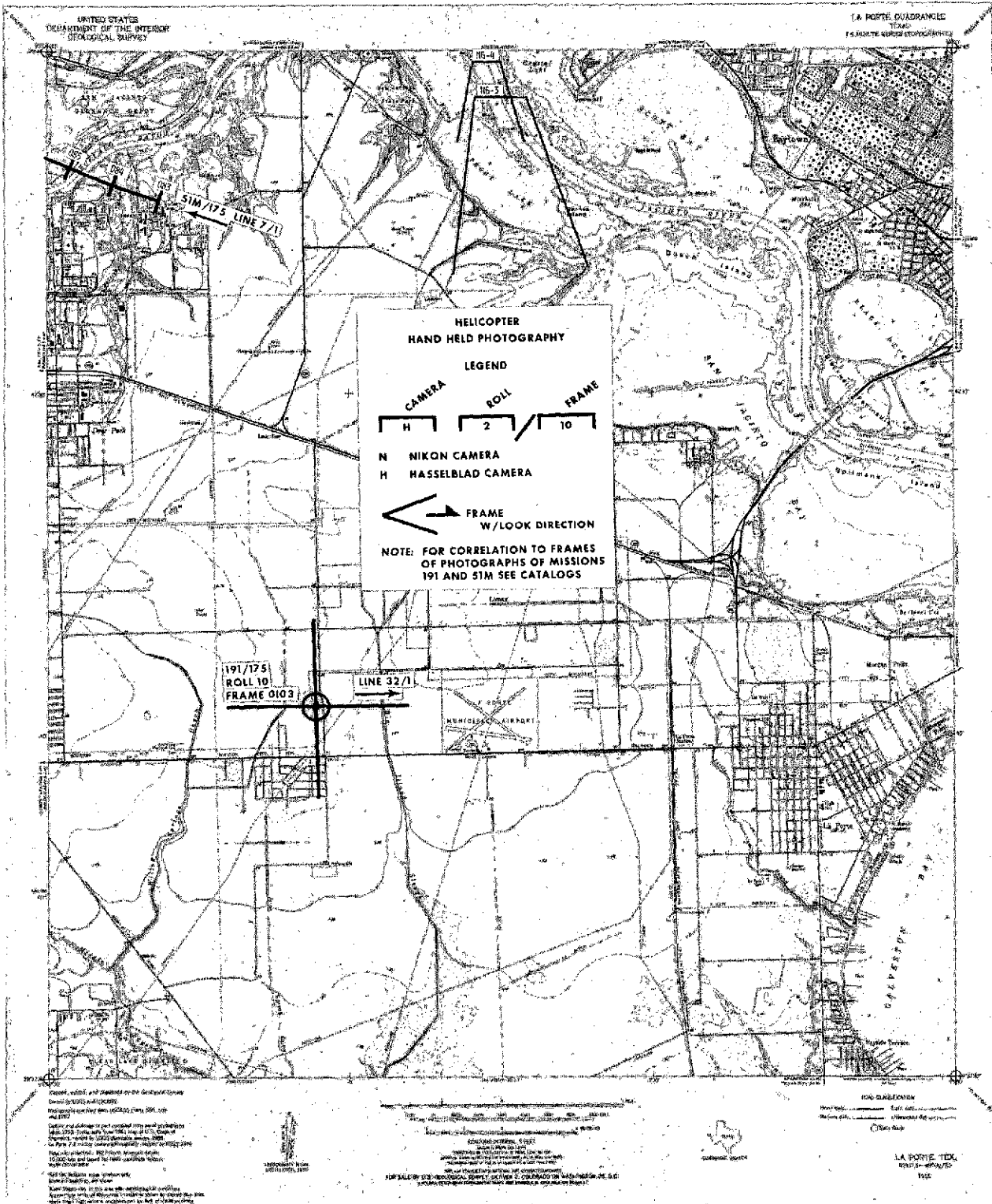


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 Dotted: ...
 Stippled: ...
 Solid: ...

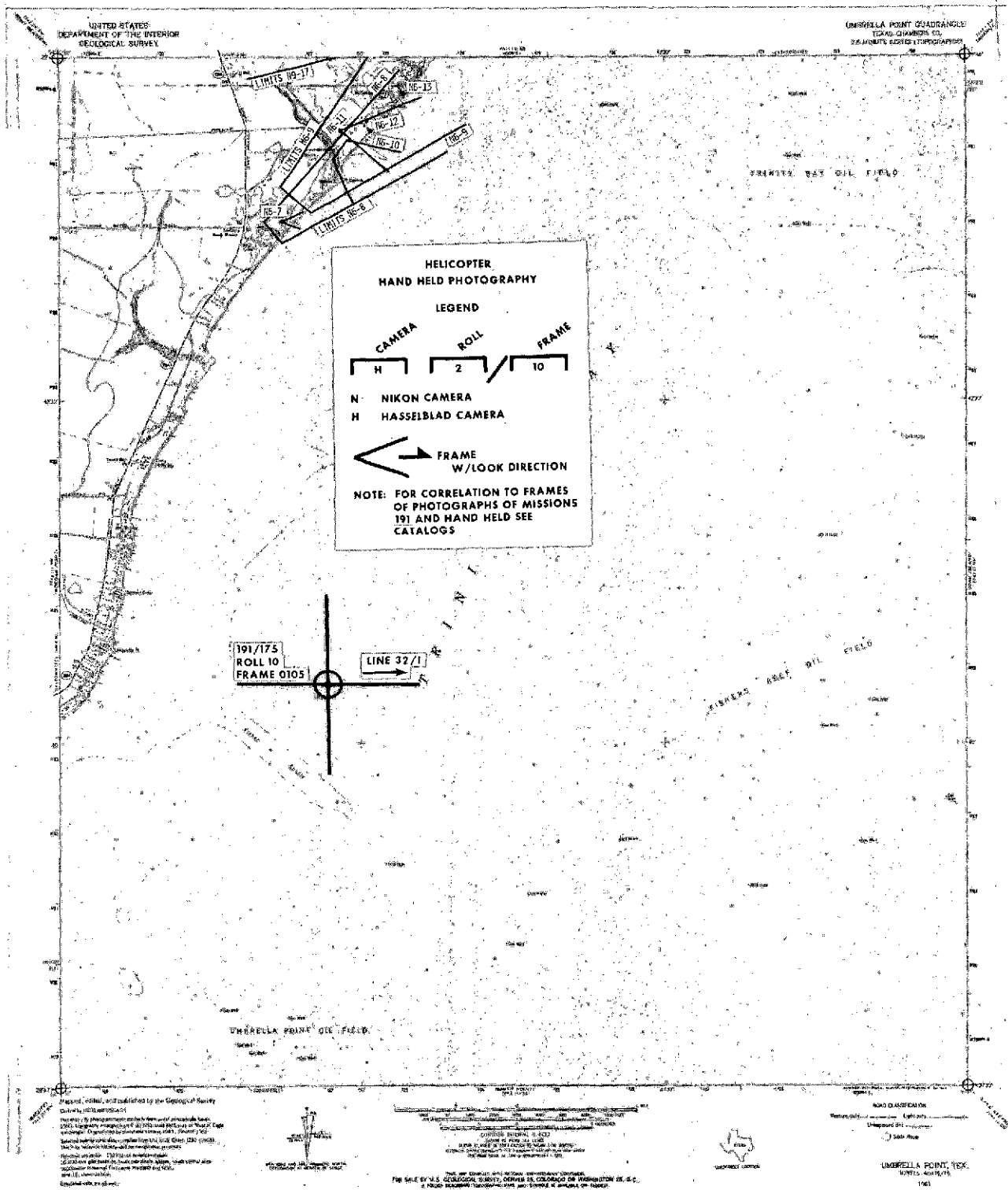
PASADENA, TEX.
 1961 24-48001 52 X 3
 1961

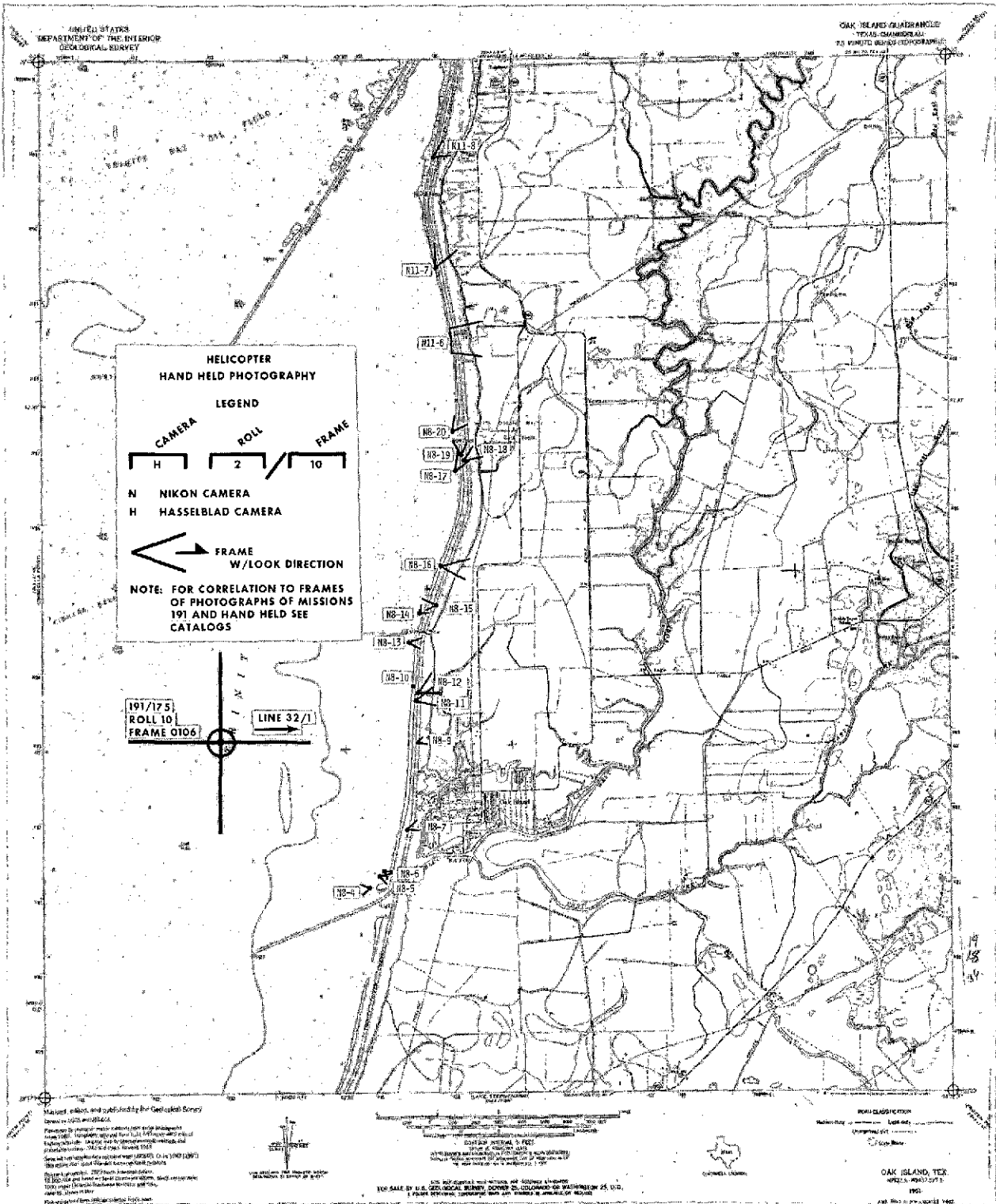


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14 NORTH 4000 FEET
LA PORTE, TEX.
1954





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GEOLOGICAL SURVEY

OAK ISLAND QUADRANGLE
TEXAS (SHARPS) ALL
TO UNITED STATES GEOGRAPHIC
SHEET NO. 25, 191

**HELICOPTER
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LEGEND

CAMERA ROLL FRAME

┌───┐ ┌───┐ ┌───┐

└───┘ └───┘ └───┘

N NIKON CAMERA
H HASSELBLAD CAMERA

← FRAME
W/LOOK DIRECTION

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191 AND HAND HELD SEE
CATALOGS

191/175
ROLL 10
FRAME 0106

LINE 32/1

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1963

CLASSIFICATION

Map No. 25, 191

Scale 1:50,000

OAK ISLAND, TEX.

191

SOMMERVILLE DAM

AREA

Line 11 (51M)

