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SURFACE METROLOGY · NUMISMATICS

REPORT AZR-8R-1735-MF
ISSUED 26 September 2026, 12:20 PM EDT
REV C

COIN EXAMINATION REPORT

Mexico, Philip V, 8 Reales "Pillar Dollar", 1735 Mo MF

Mexico City mint · assayer MF · KM#103 · Numista #15066 · ex Rooswijk, per the seller



Obverse — crowned shield of arms. Photograph, even light.



Reverse — crowned hemispheres between crowned pillars. Photograph, even light.

CONDITION	WEIGHT	DIAMETER	RIM THICKNESS	FIELD PITTING
≈ AU	26.18 g	39.5 mm	2.41 mm	16 · 27 /cm²
an AI reading of the photographs, not a certified grade	owner's balance · std 27.07 g (−3.3 %)	declared · std 40 mm	caliper, on the rims	obverse · reverse (§04)

SURFACES	Scattered small, shallow pits in the open fields: 16 per cm² on the obverse and 27 on the reverse (condition map items 1–6; §04). Detected depressions; the detector does not decide their cause.
REVERSE CENTRE	The hemispheres (36 µm) and the central crown (39 µm) stand low against the reverse legend's words (136 and 141 µm); outlines traceable (item 7). An observation: the relief alone does not separate a weak strike from wear or corrosion.
APPEARANCE	Silver-grey with light toning; darker toning in the reverse field right of the pillars. Denticled borders visible around both faces in the photographs.

01 Condition map

Both faces photographed in even light. **Red circles**: each pit the detector found in the open field (away from the design; method in §04). **Numbered circles**: the densest pitting, the deepest pits on each face and low relief at the reverse centre. Close-ups follow.

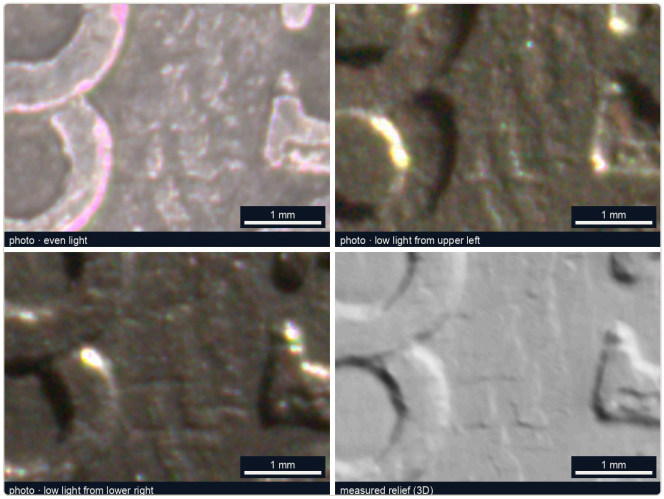


Obverse (left) and reverse (right), upright, at matching scale.

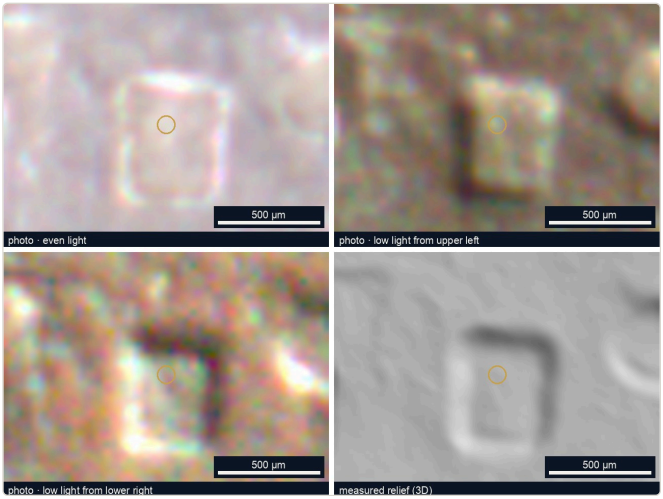
NO.	FACE	LOCATION	FINDING	MEASURED
1	Obverse	3 o'clock	Densest pitting on this face	5 pits within 1.5 mm of this point
2	Obverse	8 o'clock	Pit in the open field	0.43 mm across and 17 µm deep
3	Obverse	9 o'clock	Pit in the open field	0.24 mm across and 12 µm deep
4	Reverse	2 o'clock	Densest pitting on this face	8 pits within 1.5 mm of this point
5	Reverse	4 o'clock	Pit in the open field	0.30 mm across and 27 µm deep
6	Reverse	4 o'clock	Pit in the open field	0.24 mm across and 22 µm deep
7	Reverse	centre	Low relief at the reverse centre	relief 36 µm vs lettering 136 µm · close-up FIG 10 (§05)

CLOSE-UPS IN CAPTURED LIGHT

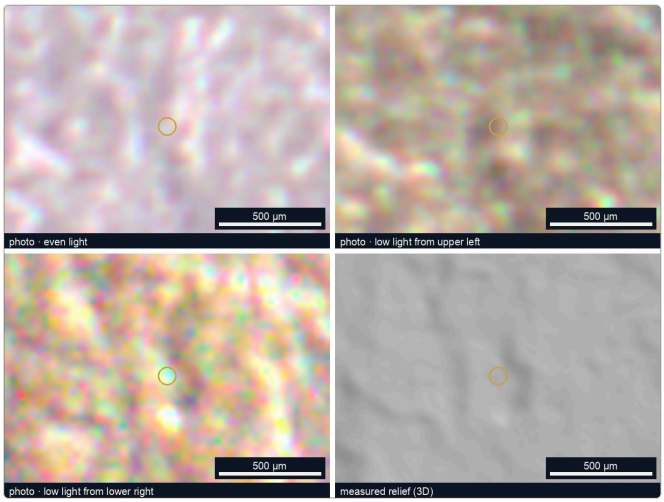
Each item four ways: a photograph in even light, photographs lit low from opposite sides (relief casts shadows, a pit shows a dark and a bright wall), and the measured relief. The photographs are captured frames from this examination, not retouched; each tile carries a scale bar.



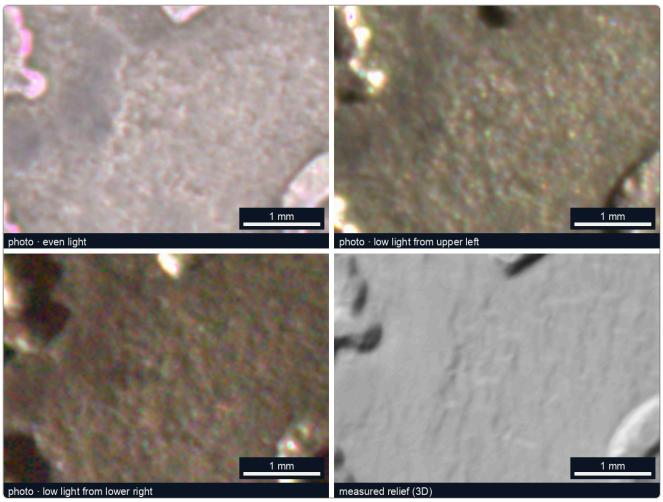
ITEM 1 Densest pitting, obverse field at 3 o'clock.



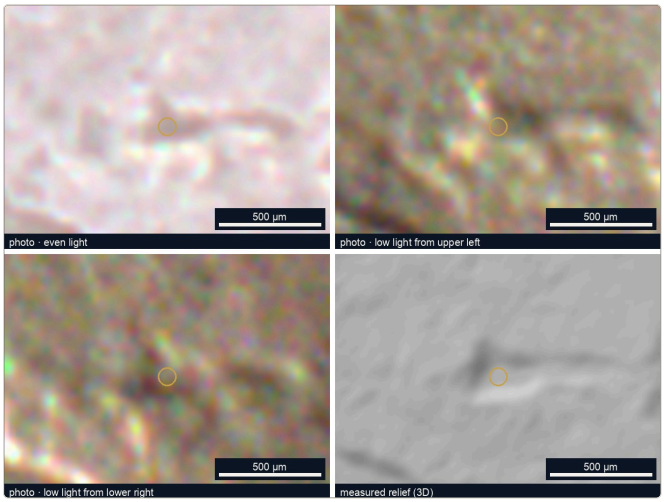
ITEM 2 Pit, obverse field at 8 o'clock (circled).



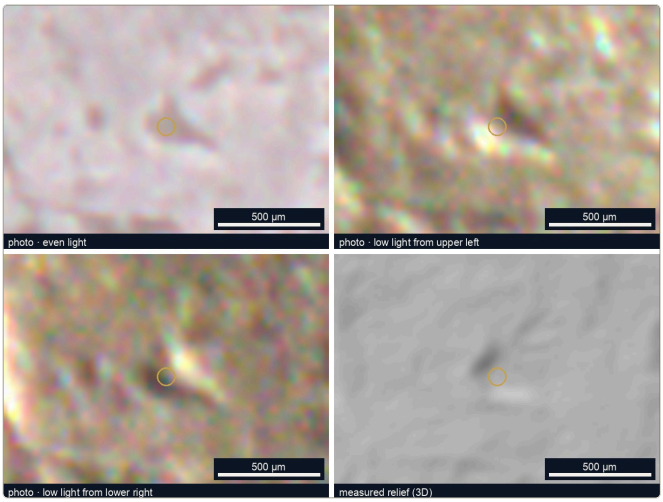
ITEM 3 Pit, obverse field at 9 o'clock (circled).



ITEM 4 Densest pitting, reverse field at 2 o'clock.



ITEM 5 Pit, reverse field at 4 o'clock (circled).



ITEM 6 Pit, reverse field at 4 o'clock (circled).

02 Identification

Legends, marks and dimensions read from the measured surface, compared against the catalogue type.

ELEMENT	READ ON THE COIN	CATALOGUE (NUMISTA #15066)
Obverse legend	PHILIP · V · D · G · HISPAN · ET IND · REX ❀	✓ PHILIP · V · D · G · HISPAN · ET IND · REX ❀
Left of the shield	MF (assayer's mark: M over F, pellet above, rosette below)	✓ · MF ❀
Right of the shield	8 (denomination, between two rosettes)	✓ ❀ 8 ❀
Reverse legend	❀ VTRAQUE VNUM ❀	✓ ❀ VTRAQUE VNUM ❀
Reverse exergue	1735 (Mo ❀ 1735 ❀ Mo: the mint mark either side of the date)	✓ issued 1732–1747 (the type's range; the catalogue's example dates are not this coin's)
Pillar scrolls	PLVS legible on the left scroll; right scroll lettering faint	≠ PLUS VLTR

The legends, marks, date and denomination agree with the catalogue type **KM#103** (Numista #15066, 1732–1747): Mexico City, Philip V, assayer MF; the date 1735 corresponds to Numista issue #79237 and to the sale record's references (Yonaka-M8.35; KM-103; Cal-1443). The pillar-scroll row is flagged because the reading is partial (PLVS, with V for U, on the left scroll; the right scroll faint), not because a different legend was read.

PHYSICAL

MEASURE	THIS COIN	TYPE STANDARD	Δ
Weight	26.18 g (owner's balance) · 26.17 grams (sale record)	27.07 g	−3.3 %
Diameter	39.5 mm (declared)	40 mm	−1.2 %
Thickness at the rim	2.41 mm (caliper, on the rims)	—	—
Fineness	—	Silver (.917)	—

03 Condition

ELEMENT	DETAIL VISIBLE	SOFTER AREAS
Crown (obverse)	Separate pearls along the arches; orb and cross at the apex; jewel settings in the band.	A few pearls on the right inner arch run together.
Castles	Three crenellated towers each; arched openings; a row of small windows in the lower body.	—
Lions	Crowned heads, mane curls, body hatching, extended forepaws, toes, tails.	—
Fleurs-de-lis	Three fleurs, each with three petals and a band.	Petal tips slightly rounded.
Pillar crowns (reverse)	Arches, band, finial.	Finials without a distinct cross.
Central crown (reverse)	Outline, arches, scrolls, band settings.	Pearled edge runs together.
Hemispheres (reverse)	Both globes outlined; landmass shapes.	Interior detail indistinct.
Legends and date	The letters, stops and numerals of both legends and the date were read; serifs visible on the letters shown in the close-ups.	—

ASSESSMENT

Detail comparable to About Uncirculated (AU), provisional

Detail comparable to About Uncirculated (AU), provisional: the fine, easily worn details of the obverse remain (the close-ups of the crown, castles and lions). The softness is confined to the highest points at the centre of the reverse and to the pillar-crown finials. It is recorded as observed: the photographs and the relief do not by themselves separate a weak strike, light wear on those points or surface loss from the sea. Relief of the preserved elements above the field around them: the legend's words 158, 138 and 139 µm on the obverse and 136 and 141 µm on the reverse; the pillar crowns 103 and 116 µm; the central crown 39 µm and the hemispheres 36 µm. Recorded for comparison with later scans; not yet calibrated against graded coins.

Surfaces. Light, scattered porosity in the open fields (16.1 and 27.2 pits per cm²; §04 and the condition map). In the close-ups of the elements listed, no pit or mark was seen interrupting the design.

Reverse centre. The hemispheres and the central crown stand lower than the lettering and the pillar crowns (item 7; FIG 10): an observation, which does not by itself separate a weak strike, light wear or corrosion.

Scope. The table is an AI reading of the photographs and close-ups (§01, §05) for the elements listed; elements not listed were not individually inspected.

04 Surfaces: porosity and appearance

The sale record mentions light surface porosity. These are the depressions the instrument measured in the open fields: where they are, how large, how deep, and how they compare with other coins measured the same way.

PITS IN THE OPEN FIELD

	OBVERSE	REVERSE
Pits found	45	95
Open field examined	279 mm²	350 mm²
Density	16.1 per cm²	27.2 per cm²
Size across (median · p90 · max)	0.12 · 0.19 · 0.43 mm	0.13 · 0.23 · 0.43 mm
Depth (median · p90 · max)	8 · 10 · 17 µm	8 · 12 · 27 µm
Nearest-pit distance (median)	0.76 mm	0.70 mm
Nearest-neighbour ratio (descriptive)	1.12	0.91
Pits on the raised design (less reliable)	114	102

Face: the coin inside its own outline (the photo cache's coin mask (even-light picture), checked against the outline diameter). Open field: field pixels at least 0.2 mm from raised design, outside the holes the design encloses (letter counters, windows) and away from the rim band. A counted depression is at least 6 µm on the obverse and 6 µm on the reverse below its filled surroundings (each face's own threshold: the larger of a fixed floor and four robust sigmas of its field) and at least 0.006 mm² in area. These are detected depressions; their cause (corrosion, porosity, a strike or planchet flaw) is not decided by the detector.

OTHER COINS MEASURED WITH THE SAME CODE (PITS PER CM² OF OPEN FIELD, WHERE COMPARABLE)

COIN	OBVERSE	REVERSE	MEDIAN DEPTH
This coin	16.1	27.2	8 µm
8 reales, chopmarked, circulated	not comparable: 69 px/mm sampling	not comparable: 69 px/mm sampling	—
2 reales 1759, circulated	0.0	1.7	15 µm
Reference specimen: Silver Eagle 2001, uncirculated (one coin)	—	not comparable: 67 px/mm sampling	—

The comparison coins are examples, not a population baseline; a density is shown only where the sampling and the detection threshold are close to this coin's.

Where. Pitting is spread over the open fields of both faces; the densest pitting on each face is marked on the condition map (items 1 and 4). The nearest-neighbour ratio is a description only: it is not corrected for the irregular shape of the field around the design, so it does not by itself establish clustering.

What it supports. The porosity here is many small, shallow depressions (median 0.12 mm across and 8 µm deep on the obverse, 0.13 mm and 8 µm on the reverse) spread over the fields, not a few large spots. These are detected depressions at the stated thresholds; smaller defects may be present. The detector does not identify their cause: the seller's provenance ("Rooswijk (sunk 1739), with original (generic) certificate from the salvors"; Sedwick Treasure Auction 39, lot 439, 7 May 2026) makes sea-water corrosion a plausible source, not a measured one.

Appearance. Read from the photographs (grey-card colour balance; cover): Silver-grey with light toning; darker toning in the reverse field right of the pillars. Denticled borders visible around both faces in the photographs. Hairlines, reflectivity and lustre are not systematically assessed.

05 Detail evidence

Photographs from this examination: the coin lit low from the upper left (three captured frames averaged), shown upright, colour balanced against a grey card, each with a scale bar. Crops are at instrument resolution (51.8 pixels per mm).



FIG 1 Obverse crown: pearls along the arches, orb and cross, jewel settings in the band.

OBVERSE — SHIELD QUARTERS



FIG 2 Castle, upper-left quarter: crenellated towers, arched openings, windows.

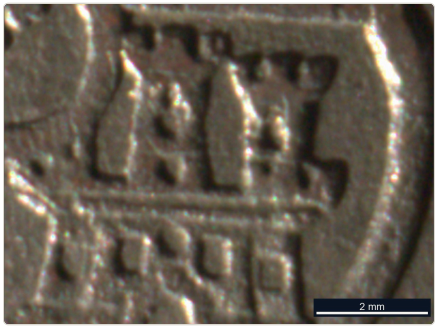


FIG 3 Castle, lower-right quarter.



FIG 4 Lion, upper-right quarter: crowned head, mane, paws, tail.



FIG 5 Lion, lower-left quarter.



FIG 6 Fleurs-de-lis at the centre of the shield.

REVERSE — CROWNS AND HEMISPHERES



FIG 7 Crown on the left pillar: finial without a distinct cross.



FIG 8 Crown on the right pillar.

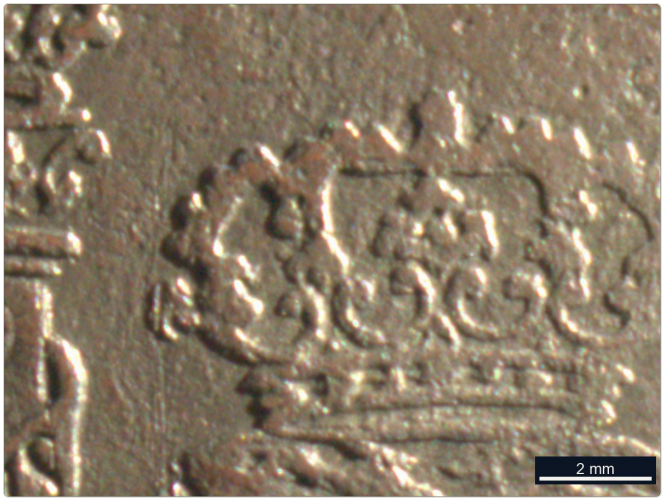


FIG 9 Crown over the hemispheres: outline and band clear, pearled edge run together.

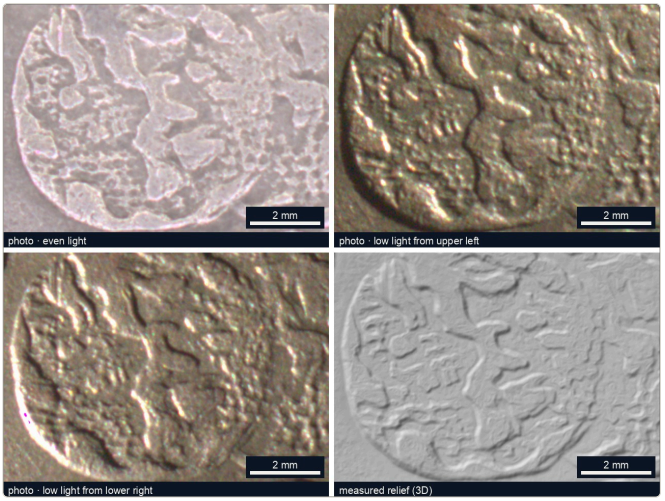


FIG 10 Item 7 — Hemispheres at the reverse centre, four views: even light, low light from the upper left and from the lower right, and the measured relief. Outlines traceable; landmasses low, with little interior detail in these views.

06 Design element maps

The design elements identified on the measured surface, shown in colour on the photograph. The outer rim lies outside the measured surface and is shown uncoloured.

Obverse (crowned shield) — identified design elements



SHIELD AND CROWN
- Shield frame
- Crown
- Castle (upper left)
- Lion (upper right)
- Lion (lower left)
- Castle (lower right)
- Three fleurs-de-lis (centre)

BORDER
- Denticled border

BESIDE THE SHIELD
- Denomination 8

LEGEND
- PHILIP
- V
- D
- G
- HISPAN
- ET
- IND
- REX
- Stops (pellets)

ASSAYER'S MARK MF
- M
- F
- Pellet above the M

ROSETTES (4)
- Rosette below F (8:30)
- Rosette above the 8 (2:30)
- Rosette below the 8 (4 o'clock)
- Rosette between REX and PHILIP (6:30)

Reverse (crowned pillars) — identified design elements



CENTRAL DESIGN
- Left pillar (PLVS scroll)
- ↳ Crown on the left pillar
- Right pillar (scroll, lettering faint)
- ↳ Crown on the right pillar
- Two hemispheres
- Crown over the hemispheres
- Waves

LEGEND
- VTRAQUE
- VNUM

BORDER
- Denticled border

DATE, MARKS AND ROSETTES
- Date 1735
- Mint mark Mo (left of the date)
- Mint mark Mo (right of the date)

ROSETTES (4)
- Rosette at 8:30
- Rosette at 7:30
- Rosette at 5 o'clock
- Rosette at 3:30

07 Method and limitations

METHOD	Each face was photographed 120 times, each frame lit by one light from a known direction; the photographs here are those frames, colour balanced against a grey card. The same frames were reconstructed by photometric stereo into a measured surface at 51.8 pixels per mm (about 19 µm per pixel), on which pits, relief, lettering and design elements are measured. Readings, element names and the condition assessment are AI-assisted and checked against the catalogue; the figures in this report are generated from the examination record.
SCALE	Provisional: the scale rests on a 39.0 mm diameter anchor whose source is not recorded; the declared diameter is 39.5 mm. Lateral lengths and areas carry the uncertainty of that anchor; a caliper reading of the diameter would anchor the scale without a new capture.
NOT DECIDED	Capture repeatability of the figures: not characterised — one capture per face in this examination. It would be settled by a re-seated repeat capture of each face.
NEXT MEASUREMENT	Caliper the diameter to anchor the scale (no new capture needed); scan professionally graded coins of this type on this instrument and compare the same wear points.
NOT SYSTEMATICALLY ASSESSED	Hairlines (noted only where a close-up shows them), reflectivity and lustre; the edge; change since an earlier scan (none exists).
NOT A CERTIFICATION	This is an instrument-based examination, not a third-party grading service opinion (NGC, PCGS).
UNCERTAINTY	Lateral lengths rest on the scale stated under Scale above; where that scale is provisional, so are they. Heights — relief, depression depths, steps — are relative measurements within one capture, referred to the surface around each feature; their repeatability between captures has been measured on one coin only, and absolute height accuracy is not certified. The long-range shape of a face (bowing, warp) is known less well than local relief. The solve grid is a sampling grid, not a demonstrated optical resolution.

DIGITAL SUPPLEMENT

In the delivery bundle AZR-8R-1735-MF-revC-bundle.zip, beside this PDF: the clean face photographs and animations of the captured frames (one light at a time, going round the coin).

AZR-8R-1735-MF-REVC-OBVERSE.JPG	The obverse, photographed in even light, without annotations.
AZR-8R-1735-MF-REVC-REVERSE.JPG	The reverse, photographed in even light, without annotations.
AZR-8R-1735-MF-REVC-OBVERSE-SHIELD_LIGHT_SWEEP.GIF	The whole obverse under each of the 60 low lights in turn.
AZR-8R-1735-MF-REVC-REVERSE-PILLARS_LIGHT_SWEEP.GIF	The whole reverse under each of the 60 low lights in turn.
AZR-8R-1735-MF-REVC-REVERSE-HEMISPHERES_LIGHT_TOUR.GIF	The hemispheres at the reverse centre (item 7) under changing light.
AZR-8R-1735-MF-REVC-OBVERSE-SHIELD-CHARGES_LIGHT_TOUR.GIF	The shield's castles, lions and fleurs-de-lis under changing light.

REFERENCES

Numista #15066 (KM#103); Yonaka-M8.35; KM-103; Cal-1443 (as listed in the sale record). Provenance: Sedwick Treasure Auction 39, lot 439, 7 May 2026.

PREPARED BY

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Automated examination; no reviewer sign-off is recorded for this revision.

REPORT

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This report is complete only with all pages present.

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