

ELITE DANGEROUS

Rhino Planetary Mining Survey & Mapping Field Manual

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PURPOSE

A practical companion to the Rhino Planetary Mining Public Field Guide. Use it to map a promising Planetary Mining Location (PML), build a return plan, or collect structured research data without turning every mining session into a science project.

METHOD / COLLABORATION CREDIT

This manual adapts SMART's chat-tag + F10 capture pattern, created by Pseudo6626 / pseudonymous_cypher, with direct collaboration and field testing. SMART and the local extractor + AI-report workflow are separate optional processing paths built around the same preserved Elite journal.

QUICK-READ NOTE

Routine users need only the Quick Start, Tier 1 field pages and command card. The appendices contain the full extractor, AI prompt and worked example for anyone who wants to audit or extend the workflow.

PUBLIC / PRIVACY NOTE

The worked example is anonymized. Real site records can still identify a location from system/body, PML number, coordinates, relative geometry or distinctive resource combinations. Scrub deliberately before public sharing.

Navigation

[Quick Start / TL;DR](#)

[Start a structured survey](#)

[Record a worthwhile deposit](#)

[Map the PML perimeter only when useful](#)

[Choose how to process the survey](#)

[Use the lightest geometry method that answers the question](#)

[Upgrade a site worth revisiting](#)

[Choose a research question](#)

[Tiered field command card](#)

[Appendix A — Rhino Journal Extractor v0.3.1](#)

[Appendix B — AI Site Report Prompt v0.3](#)

[Appendix C — Full Anonymized Worked Site Report](#)

Quick Start / TL;DR

ROUTINE USER PATH

Choose a PML → PML CENTER + F10 → for each worthwhile deposit use \$dep + RIGEST + F10 → optionally sample BOUNDARY + F10 → finish with SURVEY COMPLETE or SURVEY PARTIAL → then choose SMART, the reduced-data AI report workflow, or both. If that is all you need, you can stop after the Tier 1 pages and command card.

YOU DO NOT NEED TO MAP EVERY PML.

Use this workflow when a site becomes worth remembering, revisiting, comparing or researching. A few seconds of structured tagging make the site much easier to interpret later.

FOUND A PML WORTH MAPPING?

1

Choose the target

Check current market conditions, DSS the body and choose a promising Planetary Mining Location (PML).

2

Anchor the PML

At your practical center reference: PML CENTER → F10.

3

Prospect normally

Work outward with broad coverage. Roughly 3.3 km remains a useful initial screen, not a proven PML radius or boundary.

4

Tag worthwhile deposits

Near a worthwhile deposit, stop and use \$dep → RIGEST → F10. The SMART Deposit Command Picker (Google Sheets or offline Excel) builds the command if you do not want to memorize the syntax.

5

Optional perimeter samples

At useful points on the visible yellow perimeter: BOUNDARY → F10. A few widely spaced samples can improve the map.

6

Let the site earn more time

Stop poor sites. Continue mapping useful sites. Finish with SURVEY COMPLETE or an honest SURVEY PARTIAL note.

7

Choose how to process the data

Use SMART for interactive analysis, the reduced-data AI workflow for a durable report, or both. Appendix C shows the report path in practice.

MOST COMMANDERS ONLY NEED TIER 1.

Tier 2 is for sites worth returning to; Tier 3 is for deliberate mechanics research. Keep the original journal as the raw record.

Which tier do I need?

Tier	Use it when	What you actually do
1 — Prospect & Map	I found a PML worth remembering.	Anchor the PML, tag useful deposits, optionally sample the visible perimeter, then process the journal.
2 — Operational Site	I intend to return and mine it efficiently.	Confirm important capacities, first node/fallback, route, hazards and last verification.
3 — Research	I want to measure mechanics or contribute structured observations.	Use deliberate controls, \$area / \$rig / \$full or depletion tests only when they answer a defined question.

Processing options

SMART

Interactive local mapping and analytics from the original journal; no AI is needed to process the journal. Use SMART's live guide for current controls and layout; review anything you choose to share.

LOCAL EXTRACT + AI REPORT

Creates a durable written report/map from a reduced JSONL you can inspect before upload; the full raw journal stays local. Requires PowerShell and an AI service. The reduced file still contains private site data and the final interpretation still needs evidence review.

EITHER PATH IS VALID

Use the path that gives you the output you need; both start from the same preserved journal. Detailed instructions appear later in this manual.

Check the market before choosing a target

CHECK CURRENT PRICES AND DEMAND BEFORE YOU CHASE A COMMODITY. A good deposit can still be a poor selling opportunity today. Keep enduring site quality separate from temporary market conditions.

SMART INTERFACE NOTE

SMART is actively evolving. Use its live User Guide for current buttons and layout; this manual focuses on the field method and what the recorded evidence means.

Start a structured survey

TIER 1 / RECORD WHAT IS WORTH REMEMBERING

Choose the PML

DSS-map the body, review the PML commodity lists and pick a promising target. The list tells you what may be there; the surface survey tells you whether the site is actually useful.

Save a deliberate PML reference

PML CENTER
[F10]

Stop at the practical center you want to use for this survey, send PML CENTER in Local or System chat, then take an F10 screenshot while stationary. SMART now recognizes PML CENTER directly, and the Screenshot journal event preserves the position for mapping.

WHY TAG THE CENTER?

Explicit PML CENTER tagging gives SMART and the report workflow a clean reference instead of relying only on timing and position to infer a working group.

Cover the useful area

Scan at the center and work outward with broad coverage, adjusted for terrain. Check several directions rather than only driving one line. Roughly 3.3 km is still an efficient initial screening extent; useful deposits can lie farther out. Because PML size varies, that first pass can leave a lot of the outer area of larger PMLs unsurveyed, so a poor first pass shouldn't be taken as strong evidence that the whole PML is poor.

- Extend farther only when the site, terrain or edge contacts justify the extra time.
- If a site looks poor early, stop and keep the negative result.
- If a site looks useful, continue long enough to characterize the deposits you might actually return for.
- Skipping low-value resources is allowed, but skipped resources are not evidence of absence.

Chat channel matters

USE LOCAL OR SYSTEM FOR SMART TAGS.

SMART intentionally parses command text only from Local/System chat. That keeps Wing, Squadron and private-message text outside SMART's text parser. Send SMART commands in Local or System.

Record a worthwhile deposit

TIER 1 / A FEW SECONDS PER USEFUL DEPOSIT

Stop near the deposit, read the HUD commodity, Mineral Amount and Density, then stay still through the annotation and F10 capture.

```
$dep com:MON amt:HIGH den:MED
RIGEST 2
[F10]
```

QUICK PICKER — BUILD THE COMMAND, THEN COPY/PASTE

[SMART Deposit Command Picker — Google Sheets](#) lets you select the commodity, Amount, Density and common field commands without memorizing syntax. Offline Excel v0.3.2 (.xlsx) can be downloaded and used locally without Google Sheets. The generated command is still sent in Local/System chat.

Record	Meaning	Evidence status
\$dep	Commodity + HUD Amount + Density.	Structured deposit observation.
RIGEST	Quick visual estimate of practical usable rig space/geometry.	Estimate; not measured area and not tested capacity.
F10	Nearby commander position used as the location anchor.	Measured journal Screenshot position; not necessarily deposit center.

Use RIGEST because it is fast enough to do consistently

RIGEST is the project term for rig estimate. Use one of these simple visual values; use a range when the estimate is genuinely uncertain:

```
Exact: RIGEST 1 2 3 4 5 6 >6
Ranges when uncertain: RIGEST 1-2 2-3 4-5
```

The point is speed: record a useful geometry clue during normal prospecting, then reserve RIGCONF or \$area for sites and questions that earn the extra work.

KEEP THE EVIDENCE STRAIGHT

RIGEST is an estimate. RIGCONF records tested practical capacity; \$area samples footprint geometry. Amount, Density and depletion are separate properties.

Short corrective notes are still useful

If something unusual matters, add a short plain-English note beside the observation: “wrong target,” “same deposit as previous monazite,” “confirmed 2 rigs here,” or “rough slope; placement difficult.”

Map the PML perimeter only when useful

TIER 1 OPTIONAL / MAP THE VISIBLE PERIMETER

The visible yellow perimeter can be useful to map, especially on a site worth revisiting. It is a UI perimeter, not a proven generation edge. At a few widely separated points, use:

BOUNDARY
[F10]

Repeat at useful bearings. Three to five well-spaced samples are usually enough; note any sector you could not reach.

HOW TO READ IT
BOUNDARY records where you saw the yellow perimeter on that visit. If a deposit lies outside it, keep the observation; that is useful evidence.

Stop or continue

Stop and keep the result	Continue the survey
Few useful deposits, poor geometry, awkward terrain, or no practical cluster. Move to another candidate PML; the negative survey still belongs in the research corpus.	Several useful deposits, a promising cluster, informative perimeter behavior, or another result worth revisiting. Map enough to support a return decision.

Finish with an honest scope note

SURVEY COMPLETE
or
SURVEY PARTIAL - 3.3KM SCREEN COMPLETE

COMPLETE means you finished the survey you intended to run. If coverage was partial, say why: rough terrain, skipped sectors or an early stop.

Keep the raw record

- Keep the original journal unchanged.
- Keep only screenshots that explain something the journal cannot: unusual HUD state, ambiguous target, depletion, novel behavior, or controlled research evidence.
- After the field session, choose SMART, the reduced-data private-report path, or both. Appendix C shows the full anonymized output from the reduced-data path.

Choose how to process the survey

AFTER TIER 1 / CHOOSE THE OUTPUT YOU NEED

Choice	Advantages	Tradeoffs / cautions
SMART	Interactive maps and analytics; deterministic client-side journal processing; no AI required; optional community/aggregate features; quickest way to explore a journal.	Interface is evolving; provisional location grouping may require review; current workflow is less suited to a single durable narrative record; anything intentionally shared/community-submitted must still be privacy-reviewed.
Local extract + AI	Inspectable local reducer; full raw journal stays local; produces a durable report/map with provenance, corrections and revisit comparison.	Requires PowerShell and an AI service. The reduced JSONL is private site data, and the final interpretation still needs review.
Both	Use SMART for interactive work and the reduced-data report for archival/curated analysis from the same raw journal. Each covers a different use case.	More steps and two outputs to manage. Preserve the original journal as the common raw evidence source.

Path A — SMART

INTERACTIVE LOCAL ANALYSIS PATH

Load the original Elite journal into SMART. SMART processes it locally/client-side with deterministic code; AI does not process the journal. Nothing leaves the local workflow unless you choose to submit or share it.

- Use SMART for interactive prospecting, mapping and research.
- Its maps make bodies, working PML groups and deposits easy to inspect.
- Export or contribute data only when you choose to.
- For current buttons and matching controls, use SMART's live guide.

[Open SMART](#) • [SMART Deposit Command Picker — Google Sheets](#) • [Offline Excel v0.3.2 \(.xlsx\) — download and use locally without Google Sheets.](#)

Path B — local reduction → private AI report

DATA-MINIMIZED PRIVATE-REPORT PATH

Rhino Journal Extractor v0.3.1 is a short readable PowerShell reducer with no installer, AI or network calls. It keeps the Rhino-relevant events and commander notes needed for reconstruction, strips local screenshot paths, and adds source-file/line provenance. Inspect the JSONL before upload. Appendices A–C contain the full code, AI prompt and worked example.

RUN THE EXTRACTOR FROM THE ELITE JOURNAL FOLDER

The extractor must be in the same folder as the journal you want to process. PowerShell must then be opened from that same folder.

1. In File Explorer, open the folder where Elite Dangerous is saving your journal files. You can typically find the folder using the example below; your journal location may be different:

```
%USERPROFILE%\Saved Games\Frontier Developments\Elite Dangerous\
```

2. Copy or download [Rhino_Journal_Extractor.ps1](#) into that folder. Before continuing, confirm that Rhino_Journal_Extractor.ps1 and the Journal.*.log file(s) are visible together in File Explorer.
3. While still viewing that folder in File Explorer, click the address bar, type the word below, and press Enter:

```
powershell
```

PowerShell should open in that same folder (commonly ...\\Elite Dangerous>). The next command applies the temporary execution-policy bypass for this run.

4. Copy/paste this entire command into that PowerShell window and press Enter:

```
powershell -NoProfile -ExecutionPolicy Bypass -File .\Rhino_Journal_Extractor.ps1
```

5. Choose the journal number from the list. The extractor writes Rhino_Survey_Extract_*.jsonl into the same folder.
6. Open Rhino_Survey_Extract_*.jsonl in Notepad and review it. Then attach the extract with AI Site Report Prompt v0.3. For a revisit, include the previous report/map. Add a PML list, selected screenshots, SMART export or short clarification only when useful.

The bypass applies only to this run and does not permanently change Windows policy. If the script is “not recognized,” confirm the extractor is in the folder shown by the PowerShell prompt and that its filename matches. For journal rollover, run each relevant journal separately and provide all extracts. The reduced files still contain private site data.

USE EITHER PATH — OR BOTH.

Use SMART for interactive analysis. Use the reduced-data AI path for a durable written record, revisit comparison or research synthesis. Use both if both outputs help; neither changes the preserved journal.

Understand what SMART is showing you

READING SMART RESULTS

Raw observations are not automatically unique deposits

SMART preserves the observations in the journal. Later field review can still identify a duplicate or wrong target, so keep raw capture and curated site interpretation separate.

Provisional Mining Locations are working groups

TREAT PROVISIONAL GROUPS AS WORKING GROUPS.

Without explicit PML tagging, SMART may group deposits by position and timing. That grouping is useful, but it is not proof of a numbered DSS PML. Use PML CENTER on structured surveys.

Keep location and production separate

Do not assign production to a deposit unless chronology or deliberate cycle data supports the link. A mapped deposit can still have unassigned production.

Use each map for the question it answers

Map / view	Best use	Do not assume
SMART body / PML view	Interactive organization of journal-derived sites and working locations.	That every provisional working location equals a numbered DSS PML.
SMART deposit radar	Relative commodity / Amount / Density / approximate size visualization inside a working location.	That an inferred center is the generated PML center.
Private archival map	Reproducible center-relative operational record when a deliberate PML center is available.	That Screenshot anchors are exact deposit centers.

WORKED EXAMPLE

Appendix C shows the same evidence model carried through a complete anonymized report.

UI LAYOUT MAY CHANGE

SMART's interface is still evolving. Use the live SMART User Guide for screen-specific instructions; the evidence meanings in this manual remain the stable reference.

Use the lightest geometry method that answers the question

RIGEST, RIGCONF AND \$AREA

Method	Question answered	Burden	Evidence	Routine?
RIGEST	How much practical rig space appears available?	Seconds	Visual estimate; can support approximate mapping.	YES
RIGCONF <ID> <N>	How many rigs did I intentionally test as practically usable here?	Minutes / revisit	Tested practical capacity for that visit; not immutable maximum.	Only important nodes
\$area N + N F10 samples	What is the sampled footprint geometry?	Highest	Measured/sample-derived perimeter or footprint approximation.	Research only

Preferred geometry evidence hierarchy

sampled \$area footprint > RIGEST approximation > unknown geometry

That hierarchy concerns geometry only. RIGCONF records tested usable capacity; Amount, Density and depletion remain separate.

Use full footprint sampling selectively

Appendix C shows how these records appear in a finished site report.

A full footprint trace takes time. Use RIGEST during routine prospecting and \$area when deposit geometry itself is the research question.

SMART SIZE VISUALIZATION
SMART may visualize RIGEST when measured footprint data are absent. Treat that display as approximate and preserve the original RIGEST value.

Upgrade a site worth revisiting

TIER 2 / TURN A GOOD MAP INTO A RETURN PLAN

DO NOT DO TIER 2 WORK UNLESS THE SITE EARNS THE EXTRA TIME.

Tier 1 finds the promising deposits. Tier 2 turns that map into a repeatable mining plan.

Confirm practical capacity only where it matters

```
RIGCONF <DEPOSIT_ID> <N>  
Example: RIGCONF MON03 4
```

Use the stable deposit ID from your existing record. RIGCONF means you intentionally tested practical usable capacity on that visit. Keep the earlier RIGEST as the original estimate.

Make the return simple

- Choose a first node and fallback.
- Drive the proposed route if practical rather than relying only on geometry.
- Record difficult terrain, steep slopes, obstacles and any rig-retention constraint.
- Confirm that your saved PML center and deposit anchors reacquire the intended area.
- Measure production only when it answers an operational question; full research instrumentation is not required.

Process the revisit through the same evidence model

Process revisits through the same path you used before. Compare against the previous record, but do not call a node gone simply because coverage or scanner visibility differed. Appendix B contains the reusable AI prompt; Appendix C shows the resulting report format.

Keep a usable return plan

TIER 2 / KEEP THE RETURN PLAN USEFUL

Return plan	Record
First node / fallback	Deposit IDs, Amount/Density, RIGEST and any RIGCONF.
Route / hazards	Center → first node → fallback; driveability, slopes, obstacles, rig-retention constraints.
Last verified	Date/build, depletion state, changed geometry/Amount/Density, and next useful action.

Bookmark good sites

```
RHINO | <BODY> | PML <NN> | <RESOURCE_CODES>  
Example: RHINO | <BODY> | PML <NN> | MON+DIA
```

The bookmark returns you to the system; the custom name records the target body, PML and stable resources. Do not put temporary price tiers in the bookmark name. Recheck the market before a major return trip.

Keep site records private

Coordinates are not the only site fingerprint. System/body, PML number, relative geometry, perimeter and distinctive resource combinations can be enough to reconstruct a site. Anonymize deliberately before sharing.

Choose a research question

TIER 3 / MEASURE A DEFINED QUESTION

TIER 3 IS OPTIONAL.
Use research instrumentation only when you have a question worth answering.

Question	Optional capture	Interpretation guardrail
What is the deposit footprint?	\$area N then N F10 edge samples (N=3–12).	Do not cross another deposit; sampled footprint is approximate.
How long is a rig cycle?	\$rig id:N at deploy; \$full id:N at full.	Match IDs and separate mining completion from pickup delay.
How does the visible perimeter behave?	BOUNDARY + F10 at planned bearings.	Visible UI perimeter is not a proven generation boundary.
What changes after extraction?	DEPLETION OBSERVED + dated revisits.	A restored node brackets reformation; it does not reveal an exact timer.
Does a skipped resource matter?	LOWVAL or a short note when relevant.	Selective surveys cannot support unbiased commodity-frequency estimates.

Use SMART Science mode as the structured research workspace

SMART’s research views can help compare surveys. Keep the denominator, body/PML/deposit level, survey method, contributor/build scope and missing data explicit.

Design tests that can prove you wrong

- State the question and independent variable.
- Specify measurements and controls.
- List confounders before interpreting the result.
- State what result would weaken or falsify the hypothesis.
- Preserve negative and inconclusive observations.

Share research only if you choose

PRIVACY, CONTRIBUTION AND TOOLS

SMART community contribution

1	Load/select the relevant Elite journal in SMART.
2	Review the processed data and current privacy/location-sharing controls.
3	Use the prospecting/mining/science views as needed.
4	Submit or share only when you are comfortable with exactly what will leave the client-side workflow.

LOCAL PROCESSING DOES NOT MAKE SHARED DATA ANONYMOUS.

Body/PML details and relative geometry can identify a site even without exact coordinates. Review the contribution before you submit it.

Companion tools

[SMART — Surface Mining Analytics and Research Tool — local deterministic journal analysis, interactive mapping and research views. AI does not process the journal.](#)

[SMART Deposit Command Picker — Google Sheets or offline Excel v0.3.2 — builds survey commands for quick copy/paste.](#)

[Rhino Journal Extractor v0.3.1 \(.ps1\) — creates the reduced JSONL used for private AI reports; full source and audit notes are in Appendix A.](#)

[AI Site Report Prompt v0.3 — complete reduced-data report prompt in Appendix B.](#)

Anonymized Example Site Report — full worked example in Appendix C.

Credits and scope

Author / maintainer: CMDR Dunn Actual. Reddit & Frontier Forums: erichards2222. YouTube: CMDRRhinoerichards2222. Companion to the Rhino Planetary Mining Public Field Guide and the same ongoing field-research project.

SMART and capture-method collaboration: Pseudo6626 / pseudonymous_cypher. The chat-tag + F10 workflow was adapted from SMART and refined through direct field testing. Polar operational-map concept inspired by ReeveOne’s EDSurfaceMiningMap. No developer endorsement is implied.

v0.4.3 change summary

- Tightened the human-facing core around the Tier 1 field loop while preserving the existing structure, evidence model and technical appendices.
- Synced SMART wording with the live methodology: Local/System-only command parsing is an intentional privacy boundary, and PML CENTER / BOUNDARY are now recognized SMART commands.
- Reduced repeated caveats and contrast phrasing; definitions now do more work once, with later sections trusting the established terminology.
- Kept the PowerShell extractor, AI prompt and worked example substantially intact because explicitness is useful in auditable/machine-facing material.
- Shifted the prose toward a direct commander/researcher voice: practical first, evidence-conscious, and concise where the method is already established.

Tiered field command card

KEEP THIS PAGE BESIDE THE GAME.
Most commanders only need the Tier 1 block.

Tier 1 — Prospect & Map

PML CENTER
[F10]

\$dep com:XXX amt:XXX den:XXX
RIGEST X
[F10]

Optional perimeter:
BOUNDARY
[F10]

Finish:
SURVEY COMPLETE
or
SURVEY PARTIAL - 3.3KM SCREEN COMPLETE

QUICK PICKER
[SMART Deposit Command Picker — Google Sheets](#) | [Offline Excel v0.3.2 \(.xlsx\) — download and use locally without Google Sheets](#). Use either picker to generate \$dep, RIGEST, PML CENTER, BOUNDARY, completion, RIGCONF and research commands for copy/paste.

Commodity code uses the SMART code. Amount and Density are LOW / MED / HIGH. RIGEST can be 1–6, >6, or an honest range such as 1-2, 2-3 or 4-5. Stay near the deposit and stationary through F10.

SMART COMMANDS: USE LOCAL OR SYSTEM CHAT.
SMART deliberately parses command text only from Local/System chat; Wing, Squadron and private-message text is left outside its text parser.

Tier 2 — Operational upgrade

RIGCONF <DEPOSIT_ID> <N>

Only after intentionally testing practical capacity. Preserve the original RIGEST.

Tier 3 — Research

\$area N [N F10 samples; N=3-12]
\$rig id:N \$full id:N
DEPLETION OBSERVED
LOWVAL ... [only when it answers a useful question]

Process the result

SMART Original journal → local interactive mapping / analytics / research → optional export or contribution. See the comparison on the processing page.	REDUCED-DATA PRIVATE REPORT Original journal → local extractor → inspect reduced JSONL → AI Prompt v0.3 → durable private report. See Appendices A-B; worked example in Appendix C.
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FIELD RULE
Capture once. Keep the raw journal. Separate estimates, measurements and interpretation. Unknown stays unknown.

Appendices

Reference material and reproducibility

Appendix	Contents
A	Rhino Journal Extractor v0.3.1 — what it does, privacy/safety notes, execution-policy explanation and full PowerShell source.
B	AI Site Report Prompt v0.3 — complete copy/paste prompt for Rhino_Survey_Extract JSONL files.
C	Full anonymized worked site report — extract-only example with map, deposits, boundary analysis, provenance and next action.

SMART Deposit Command Picker is available in Google Sheets or offline Excel v0.3.2.

Appendix A — Rhino Journal Extractor v0.3.1

Full source, behavior and privacy notes

WHY THE SCRIPT IS INCLUDED IN FULL

The extractor is intentionally short enough for a commander to inspect before running it. The goal is not to ask users to trust a black box: the exact code used to create the reduced JSONL is reproduced below. No script can be declared “safe” merely because it is short; the useful safety property here is that its behavior is narrow, readable and auditable.

What it actually does

Behavior	What that means
Lists only local journal files	When no filename is supplied, it looks in the current folder for Journal.*.log files, sorts by modified time and shows the 10 most recent. The commander explicitly selects one.
Reads one chosen journal	It uses Get-Content on the selected journal. It does not alter or delete the source journal.
Keeps a fixed event whitelist	Only Fileheader, Location/FSD/body context, DSS/Scan events, Rhino launch/dock/touchdown/liftoff, Screenshot, SendText, Cargo, MiningRefined and MaterialCollected are retained.
Keeps all commander SendText	Survey tags, corrections and free-text notes are preserved. This also means ordinary outgoing chat in the selected journal can appear in the extract; inspect the JSONL before uploading it.
Minimizes screenshot-path exposure	For Screenshot events, the local folder path is removed and only the basename is kept so an optionally supplied screenshot can still be matched.
Adds provenance	_source_file and _source_line are added so an AI report can trace retained evidence back to the original journal.
Writes a new JSONL beside the journal	The output is named Rhino_Survey_Extract_<journal-tag>.jsonl. Re-running the same journal replaces that extract file only; it does not overwrite the journal.
Makes no network calls	There is no Invoke-WebRequest, Invoke-RestMethod, web client, socket call, upload routine or external service call in the script.

Why the PowerShell bypass does not permanently lower policy

The documented command powershell -NoProfile -ExecutionPolicy Bypass -File

.\Rhino_Journal_Extractor.ps1 starts a new PowerShell process for that run. -ExecutionPolicy Bypass applies to that process rather than permanently changing the machine policy, and -NoProfile prevents the user's PowerShell profile from loading into that child process. The extractor itself does not modify the registry or execution policy and does not request administrator privileges.

IMPORTANT PRIVACY CAVEAT

The extract is data-minimized, not anonymous. It can retain system/body context, GPS anchors, PML geometry, resource observations and all outgoing SendText from the selected journal. Open the JSONL in Notepad and review it before uploading. Keep private site identifiers private unless you deliberately choose to disclose them.

Full PowerShell source

Copy/save this exact text as *Rhino_Journal_Extractor.ps1* if you prefer to create the script yourself rather than download it.

```

param([string]$Journal)

# RHINO JOURNAL EXTRACTOR
# - Reads only the journal you choose.
# - Keeps only Rhino-relevant event types.
# - Keeps all SendText so survey tags, corrections, and notes are preserved.
# - Keeps only the screenshot filename, never its local folder path.
# - Makes NO network calls.

if (-not $Journal) {
    $recent = @(Get-ChildItem -File "Journal*.log" |
        Sort-Object LastWriteTime -Descending |
        Select-Object -First 10)

    if ($recent.Count -eq 0) {
        Write-Host "No Journal*.log files found in this folder."
        exit
    }

    Write-Host ""
    Write-Host "Choose a journal:"
    for ($i = 0; $i -lt $recent.Count; $i++) {
        Write-Host (" {0,2} {1}" -f ($i + 1), $recent[$i].Name)
    }

    do {
        $pick = Read-Host "Enter number 1-$(($recent.Count))"
        $n = 0
        $valid = [int]::TryParse($pick, [ref]$n) -and $n -ge 1 -and $n -le $recent.Count
    } until ($valid)

    $Journal = $recent[$n - 1].FullName
}
else {
    $Journal = (Resolve-Path -LiteralPath $Journal).Path
}

$keep = @(
    "Fileheader", "Location", "FSDJump", "ApproachBody", "SupercruiseExit",
    "SAAScanComplete", "SAASignalsFound", "Scan",
    "LaunchSRV", "DockSRV", "Touchdown", "Liftoff",
    "Screenshot", "SendText", "Cargo", "MiningRefined", "MaterialCollected"
)

$tag = [IO.Path]::GetFileNameWithoutExtension($Journal) -replace '^Journal\.', ''
$out = Join-Path (Get-Location) "Rhino_Survey_Extract_$tag.jsonl"

Remove-Item -LiteralPath $out -ErrorAction SilentlyContinue
$total = 0
$kept = 0
$lineNo = 0

Get-Content -LiteralPath $Journal | ForEach-Object {
    $lineNo++
    $total++

    try { $e = $_ | ConvertFrom-Json } catch { return }

    if ($e.event -in $keep) {
        if ($e.event -eq "Screenshot" -and $e.Filename) {
            $e.Filename = [IO.Path]::GetFileName($e.Filename)
        }

        $e | Add-Member -NotePropertyName "_source_file" -NotePropertyValue ([IO.Path]::GetFileName($Journal))
        $e | Add-Member -NotePropertyName "_source_line" -NotePropertyValue $lineNo

        $e | ConvertTo-Json -Compress -Depth 20 |
            Add-Content -LiteralPath $out -Encoding UTF8

        $kept++
    }
}

Write-Host ""
Write-Host "Created: $out"
Write-Host "Kept $kept of $total journal events."
Write-Host "No network calls were used."

```

Appendix B — AI Site Report Prompt v0.3

Complete copy/paste prompt for reduced Rhino Survey Extract files

Use one or more Rhino_Survey_Extract_*.jsonl files created by the extractor. For a revisit, also provide the previous private report/map. Optional context can include the PML number/label, Navigation-panel resource list/screenshot, selected screenshots, SMART export, or a short commander clarification. Copy the text from START PROMPT through END PROMPT when using another AI system.

AI Site Report Prompt v0.3

Use this prompt with one or more `Rhino\_Survey\_Extract\_\*.jsonl` files created by **Rhino Journal Extractor v0.3.1**. For a revisit, also attach the previous private site report/map. Optional supporting items include Navigation-panel screenshots, selected F10 screenshots, a SMART export, and a short commander clarification.

Copy everything between START PROMPT and END PROMPT.

START PROMPT

Analyze the attached Elite Dangerous Rhino planetary-mining survey extract(s). Produce one self-contained **private site report** with a reproducible operational map where the evidence supports one, an operational assessment, limitations, and one highest-value next action.

INPUT MODEL

The primary survey input is a **Rhino Survey Extract**: a deterministic, locally generated, reduced derivative of the commander's preserved Elite journal. It intentionally omits unrelated journal events. Do **not** treat absent non-Rhino events as missing survey evidence and do not ask for the full raw journal unless the extract is corrupt or an explicitly requested audit cannot be completed without it.

Each retained event may contain:

- `\_source\_file`: original Elite journal filename;
- `\_source\_line`: original journal line number;
- `Filename` on Screenshot events: screenshot **basename only**, with the local folder path removed.

Use these fields for reproducible provenance. If an optional screenshot is attached and its filename matches a retained Screenshot event, associate it by basename and timestamp/context.

Optional contextual inputs may include:

- **PML number/label** supplied by the commander;
- Navigation-panel screenshot or typed PML commodity list;
- previous site report/map for a revisit;
- SMART export or screenshots;
- selected field screenshots;
- post-survey commander clarification covering duplicates, wrong targets, tested rig capacity, terrain, skipped resources, route constraints, or other remembered context.

The Elite journal normally records how many PML signals exist on a body but does **not** reliably encode which numbered PML the commander selected or its full Navigation-panel commodity list. If that information is not supplied separately, leave it UNKNOWN rather than inferring it from nearby deposits.

OUTPUT

If file creation is available, produce a polished DOCX with the map embedded. Otherwise return one complete structured report in chat. Prefer one durable primary report rather than multiple disconnected artifacts.

Use these sections when supported:

1. Executive assessment
2. Source basis, identity and completeness
3. PML-centered operational map / spatial reconstruction
4. Deposit observations and correction layer
5. Boundary/perimeter observations
6. Operational assessment and cluster/route candidates
7. Production / raw-material observations
8. Research implications
9. Next highest-information action
10. Suggested Galaxy Map bookmark
11. Raw-observation provenance / key source references

Do not create empty sections merely to satisfy the template.

EVIDENCE DISCIPLINE

Preserve **RAW DATA** -> **DERIVED VALUES** -> **INTERPRETATION**.

Use calibrated labels:

- **MEASURED** — direct journal/timestamp/GPS/body/property/output evidence;
- **FIELD OBSERVATION** — commander-observed context or clarification not independently instrumented;
- **DERIVED** — reproducible calculation from recorded observations;
- **COMMUNITY-REPORTED** — third-party report if explicitly supplied;
- **WORKING HYPOTHESIS** — inference that remains testable;
- **UNKNOWN** — not established.

ELITE DANGEROUS | RHINO PLANETARY MINING — SURVEY & MAPPING FIELD MANUAL

If an existing previous report contains other project labels, preserve them where appropriate, but do not invent evidence classes unsupported by the supplied inputs.

Never invent Amount, Density, deposit identity, coordinates, rig capacity, PML number, PML commodity list, terrain, production, depletion, reformation, or market information. Preserve contradictions and corrections rather than silently rewriting raw observations.

CHRONOLOGY AND CONTEXT

Process all supplied extract files chronologically using journal UTC timestamps. Respect body/system changes, session boundaries, and `\_source\_file` / `\_source\_line` provenance.

If a survey spans journal rollover, merge the extracts only by supported chronology. Do not force associations across a body change, a large unexplained discontinuity, or another context break.

A `SURVEY COMPLETE` note means the commander completed the intended survey protocol; it does **not** prove every deposit in the PML was found. A `SURVEY PARTIAL ...` note limits completeness to the stated scope. Selective logging of high-value resources is not evidence that skipped commodities were absent.

FIELD ANNOTATIONS

Recognize the following commander annotations when present in SendText:

PML CENTER

`PML CENTER` followed by the next valid stationary F10 Screenshot on the same body establishes the **practical survey center reference**. It is a reproducible commander-chosen reference, not proof of the game's mathematical/generated PML center.

Deposit observation

A deposit sequence normally consists of:

`\$dep ...` or `dep ...` -> `RIGEST ...` -> next valid F10 Screenshot.

Use the deposit annotation for commodity, HUD Mineral Amount and Density. Use the Screenshot event for the commander-position anchor. Never treat the commander Screenshot coordinate as an exact deposit-center coordinate unless separately demonstrated.

Do not cross the next deposit annotation, body/session discontinuity, or clear context transition to force an association. Flag ambiguous or missing chains.

RIGEST

`RIGEST` is a quick **visual estimate** of practical usable rig space/geometry. Valid field practice may use exact values such as `1`, `2`, `3`, `4`, `5`, `6`, `>6`, or uncertainty ranges such as `1-2`, `2-3`, `4-5`.

RIGEST is:

- not measured square meters;
- not proof that that many rigs were physically tested;
- not an immutable deposit maximum;
- separate from Amount, Density, depletion capacity and measured footprint geometry.

Preserve the original value exactly.

RIGCONF

`RIGCONF <DEPOSIT\_ID> <N>` records deliberately tested practical capacity on that visit. Retain the earlier RIGEST and report RIGCONF separately. Merely observing N deployed rigs does not prove that more could not fit unless the commander explicitly tested practical capacity.

BOUNDARY

`BOUNDARY` followed by F10 records where the commander observed the visible yellow PML perimeter during that visit. Multiple samples may be used to characterize perimeter geometry relative to the practical PML center.

Do **not** reinterpret the visible perimeter as a proven generation boundary, scanner/contact limit, or universal PML radius. A deposit observed outside the sampled perimeter is valid contradictory evidence and must be preserved.

\$area

`\$area N` uses the next N valid F10 edge samples for the active deposit, where N is 3-12. Do not cross another deposit annotation. Treat the resulting footprint/perimeter as sampled geometry, not an exact game-engine boundary.

Geometry evidence preference when available:

sampled \$area footprint > RIGEST approximation > unknown geometry.

RIGCONF is a separate capacity axis, not part of this geometry hierarchy.

\$rig / \$full

Match `\$rig id:N` and `\$full id:N` using the same ID. Use them only for supported deployment-to-full timing/cycle analysis. Keep mining completion distinct from later collection/pickup delay.

DEPLETION OBSERVED / LOWVAL / free text

Process `DEPLETION OBSERVED`, `LOWVAL ...`, and ordinary-language SendText notes chronologically. Free text can document corrections, duplicates, terrain, skipped resources, route constraints, tested capacity, or unusual behavior.

A nearby note may clarify the active observation only when context is unambiguous. Never cross another deposit, body change, session discontinuity, or clear context transition to force association.

POST-SURVEY COMMANDER CLARIFICATION

A separately supplied commander clarification may identify duplicates, void a wrong target, confirm tested practical capacity, explain intentionally skipped resources, describe terrain/driveability, or add other remembered field context.

Classify such information as FIELD OBSERVATION unless another source establishes a stronger class. Apply it to the **derived operational view** while preserving the original raw observation unchanged in provenance.

ELITE DANGEROUS | RHINO PLANETARY MINING — SURVEY & MAPPING FIELD MANUAL

Examples:

- “MON-06 is the same deposit as MON-05” -> retain both raw observations; collapse only the operational/unique-deposit view.
- “SER-01 was a wrong target” -> retain the raw row as voided; exclude it from operational totals/map/cluster analysis.
- “Every RIGEST 1/2 was physically checked” -> may support tested practical capacity for unambiguously referenced deposits, but do not fabricate a journal RIGCONF event.

DUPLICATES AND CORRECTIONS

Repeated nearby same-commodity observations are not automatically the same deposit. Consider chronology, coordinates, Amount/Density, notes and explicit commander clarification.

Proximity may justify ****possible/probable duplicate**** language but not a forced merge. Keep raw rows and stable IDs. If a duplicate is explicitly confirmed, collapse only the derived operational view and explain the correction.

Wrong-target or erroneous observations remain in the raw provenance layer but are excluded from derived operational counts, maps, clusters and routes.

SPATIAL RECONSTRUCTION

When a valid practical PML center, Screenshot coordinates and evidenced body radius are available, calculate center-to-observation great-circle range and initial bearing using a reproducible spherical/geodesic method.

Use:

- north = 0 degrees;
- east = 90 degrees;
- south = 180 degrees;
- west = 270 degrees;
- clockwise bearing;
- range in km.

A standard operational polar map should use the practical PML center as origin. Plot valid derived operational deposits, commodity identity, stable deposit IDs, Amount/Density and supported rig information. Show sampled BOUNDARY points/perimeter separately when available. Mark uncertainty rather than hiding it.

If the center or body radius is missing, do not fabricate a metric PML-centered map. Provide the anchored observations and explain exactly what is missing.

If screenshots were taken at substantial altitude or while apparently moving, flag them as commander-position anchors with increased uncertainty rather than exact deposit fixes.

BODY / PML CONTEXT

Use retained `Scan`, `SAAScanComplete`, `SAASignalsFound`, Location/FSD/body-context events to establish supported body properties and DSS/PML counts.

Keep:

- body class;
- radius and units;
- surface gravity;
- surface temperature;
- volcanism;
- composition/material information when present;
- count of PML/DSS signals when present.

Do not infer the selected numbered PML from the body-wide PML count. If a Navigation screenshot or commander statement supplies the PML number and commodity list, preserve its provenance separately from journal-derived facts.

PRODUCTION AND RAW MATERIALS

Retain `MiningRefined`, relevant Cargo snapshots and `MaterialCollected` events.

Do not automatically allocate session output to individual deposits. Attribute output to a deposit only when chronology, cycle instrumentation or explicit commander evidence supports the association.

Keep MiningRefined event counts distinct from refined tonnage unless the available journal semantics/context and corroborating cargo evidence support equivalence. When uncertain, report both the event count and the limitation. Account for Rhino refinery carry when interpreting cargo changes. The Rhino refinery can retain up to three fractional bins, and multiple bins may contain the same commodity. In an extreme partial-bin state, nearly 3 t (up to about $3 \times 0.99 \text{ t} = 2.97 \text{ t}$) of one commodity may remain in refinery carry rather than appearing as whole-ton cargo. When switching commodities, occupied partial bins may also prevent a new resource from refining until a bin is cleared/ejected. Cargo delta alone is therefore incomplete production evidence unless refinery state is known. If exact bin contents are not supplied, do not invent them; report refinery carry as an uncertainty, especially for short tests or commodity switches.

Report raw-material side drops as observed outputs with timestamps/counts when present. Do not infer a drop pool or probability from a small sample.

OPERATIONAL INTERPRETATION

Keep these concepts separate:

- HUD Amount;
- HUD Density;
- RIGEST visual geometry estimate;
- sampled `sarea` footprint;
- RIGCONF tested practical capacity;
- production throughput;
- depletion capacity/state.

ELITE DANGEROUS | RHINO PLANETARY MINING — SURVEY & MAPPING FIELD MANUAL

Assess useful clusters, best target, fallback and route only where supported. An undriven route is a **proposal**, not a measured route. Consider terrain, maximum pairwise spacing, known rig-retention observations and anchor uncertainty when judging operational quality.

A mapped prospect may be called poor, promising, or an Atlas candidate when justified. Do not call it production-qualified without suitable production evidence.

REVISITS

When a previous report/map is supplied, update the site record rather than starting over. Retain dated history and distinguish:

- confidently persistent deposits;
- uncertain reacquisitions;
- changed Amount/state;
- depletion/reformation evidence;
- new/missing observations;
- capacity confirmations;
- production changes.

Failure to see a node does not prove disappearance if coverage, scanner visibility or route differed. A restored node brackets reformation between visits; it does not establish an exact timer.

MARKET CONTEXT

Do not transmit private site identifiers to an external market search. Use current market information only if it is supplied directly or can be checked without exposing the private mining location. Otherwise state that market conditions should be rechecked separately before a major mining run.

Keep enduring site quality separate from temporary commodity price/demand.

BOOKMARK

For a promising site with known body/PML identity, suggest:

`RHINO | <BODY> | PML <NN> | <RESOURCE\_CODES>`

Do not include temporary price tiers. Omit or leave placeholders if identity is not established.

PRIVACY AND FINAL CHECK

Treat the extract, site report, maps, coordinates and reconstructable site fingerprints as private unless the commander explicitly authorizes publication.

The extract is **data-minimized**, not **anonymous**. System/body, PML identity, coordinates, relative geometry and distinctive resource combinations can identify a site.

Before delivering:

- verify that every substantive conclusion is traceable to supplied evidence;
- preserve raw observations separately from corrections/derived operational views;
- keep unknowns unknown;
- explain important omissions or ambiguities;
- include one highest-information next action;
- do not request the original full journal merely for convenience.

END PROMPT

Appendix C — Full Anonymized Worked Site Report

Extract-only public example

The following pages reproduce a complete anonymized report generated from a reduced Rhino Survey Extract. Identifying coordinates and site fingerprints were removed; the operational geometry, observations, provenance and reasoning were retained.

HOW TO READ THE EXAMPLE

Read the example as a method demonstration, not a universal template or production qualification. Watch how it preserves unknowns, keeps RIGEST as an estimate, carries corrections forward and ends with a next test instead of overstating the evidence.

Example Body

Planetary Mining Location X

Rhino Surface Survey Report - Anonymized extract-only example

ANONYMIZED PUBLIC EXAMPLE | Survey timing retained for methodological illustration

SITE STATUS: PROMISING MAPPED PROSPECT - NOT PRODUCTION-QUALIFIED. The extract supports a complete structured survey with 20 raw deposit observations, a tightly sampled visible yellow perimeter, two RIGEST-2 observations, and limited refined output. No RIGCONF, \$area, \$rig/\$full cycle instrumentation, terrain clarification, or confirmed duplicate/void correction was supplied, so capacity, uniqueness and production efficiency remain unqualified.

1. Executive assessment

Field	Result	Evidence
System / body	Example System / Example Body	MEASURED from journal body context
PML identity	PML X	FIELD OBSERVATION - commander supplied for this analysis; journal does not encode selected PML number
Survey window	02:59:52Z center anchor -> 04:18:17Z SURVEY COMPLETE (78m 25s)	MEASURED
Client	Elite 4.4.1.1 / r332841/r0	MEASURED
Body	Body-specific physical properties omitted from public example; retained privately for calculations.	MEASURED + derived conversions
DSS/PML signals	Body-wide PML count omitted from public example	MEASURED
PML commodity list	UNKNOWN in supplied extract	Do not infer from observed deposits
Raw mapped observations	20 deposit annotations: 10 SER, 7 MON, 2 QPX, 1 THO	MEASURED from SendText + Screenshot chains
Rig evidence	18 x RIGEST 1; 2 x RIGEST 2; no RIGCONF	FIELD OBSERVATION estimate only
Boundary samples	5 samples: 4.201-4.206 km; mean 4.203 km; SD 1.7 m	MEASURED anchors + DERIVED geodesic range
Production	10 MiningRefined events (7 Monazite, 3 Serendibite), with SRV cargo rising from 0 to 10	MEASURED; consistent with 10 t refined cargo, not deposit-attributed

Operational conclusion. The extract alone supports a useful mapped prospect but not a curated Operational Site Atlas entry. The strongest immediate opportunity is a compact cluster containing the two RIGEST-2 observations plus nearby one-rig estimates; however, RIGEST is visual geometry/capacity estimation rather than tested capacity, and one key anchor (SER-08) was recorded at ~1.22 km altitude. The site should be revisited for ground reacquisition, RIGCONF and timed cycle instrumentation before production qualification.

2. Source basis, identity and completeness

- Primary evidence: Rhino_Survey_Extract_example.jsonl, derived locally from Journal.example.log. Retained events preserve original source line numbers.
- PML identity: PML X supplied by the commander for this analysis. The full Navigation-panel PML commodity list was not supplied and remains UNKNOWN.
- PML CENTER at source lines 1498-1499 establishes the practical reference at an absolute position redacted from this public example. This is a commander-selected reference, not proof of a generated mathematical center.

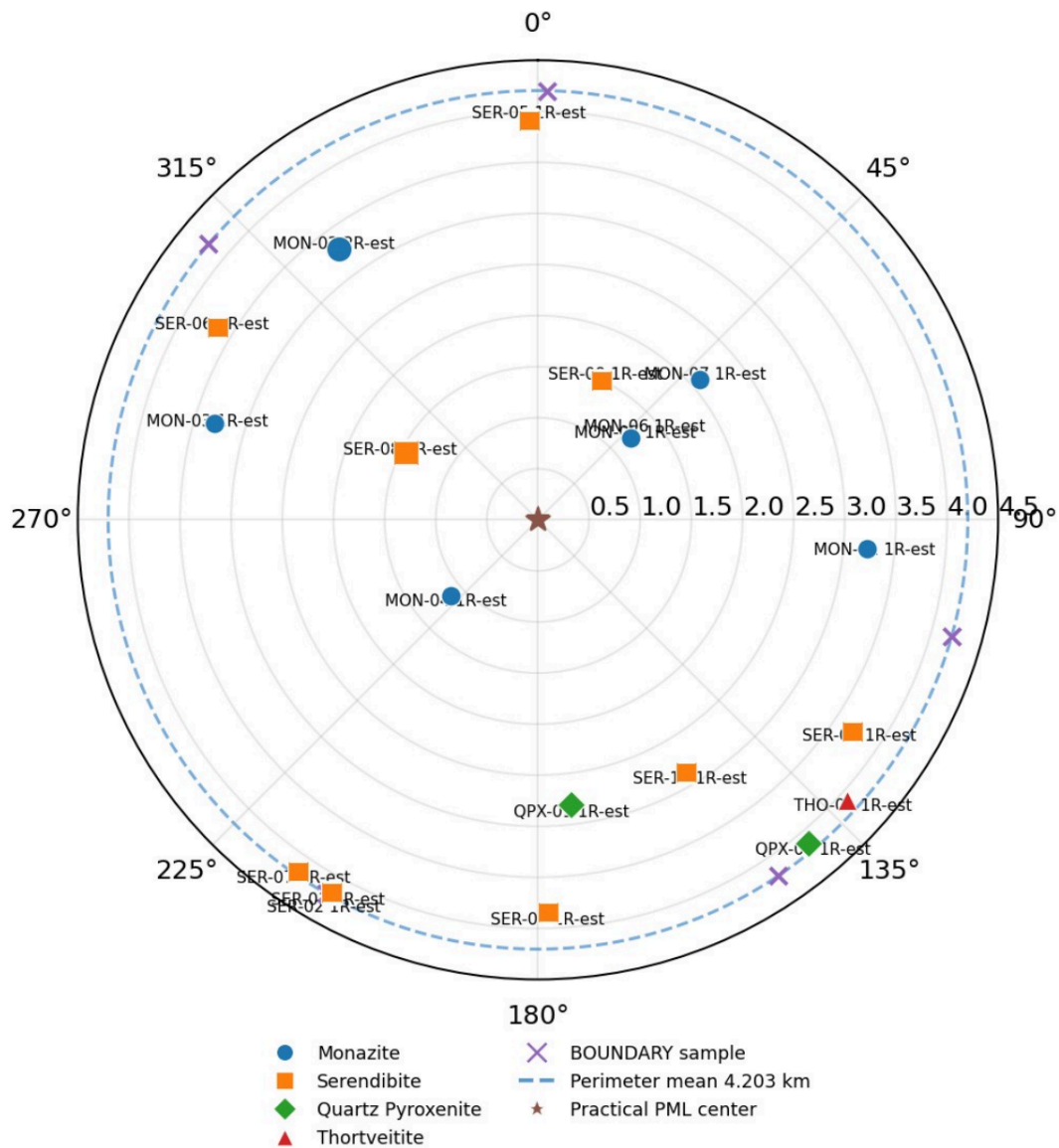
- Each deposit row uses the sequence dep -> RIGEST -> next valid F10 Screenshot. No RIGCONF, \$area, \$rig or \$full observations are present.
- SURVEY COMPLETE at source line 1592 establishes completion of the intended survey protocol, not a census of every deposit. The extract contains no explicit statement about skipped low-value resources, terrain, or search coverage outside the visible perimeter.

3. PML-centered operational map / spatial reconstruction

Geodesic reconstruction uses the privately retained body radius and the practical PML center. Bearings are initial center-to-anchor bearings, 0° North clockwise. F10 coordinates are commander positions, not proven deposit centers. All 20 raw observations are plotted because no explicit duplicate or wrong-target correction was supplied.

Example Site A - PML X

Extract-only anonymized operational map



F10 positions are commander anchors, not proven deposit centers. RIGEST labels are estimates, not tested capacity.
Observed yellow perimeter is not a proven generation boundary.

Figure 1. Anonymized example operational map. RIGEST is preserved as a visual estimate; BOUNDARY marks the observed yellow perimeter only. No raw observations are merged or voided.

4. Deposit observations and correction layer

ID	Commodity	Amt	Den	RIGEST	km	Bearing	Note
SER-01	Serendibite	HIGH	MED	1	4.176	208.9°	Near SER-02 (11.6 m); Density differs, ambiguity only
SER-02	Serendibite	HIGH	HIGH	1	4.170	209.0°	Near SER-01 (11.6 m); Density differs, ambiguity only
SER-03	Serendibite	HIGH	MED	1	3.840	178.6°	
QPX-01	Quartz Pyroxenite	HIGH	HIGH	1	2.809	173.5°	
QPX-02	Quartz Pyroxenite	HIGH	HIGH	1	4.123	140.2°	
THO-01	Thortveitite	HIGH	LOW	1	4.091	132.3°	
SER-04	Serendibite	HIGH	MED	1	3.713	124.0°	airborne/ remote anchor (1.24 km)
MON-01	Monazite	HIGH	MED	1	3.229	95.0°	
SER-05	Serendibite	HIGH	MED	1	3.915	358.7°	
MON-02	Monazite	HIGH	MED	2	3.291	323.6°	
SER-06	Serendibite	HIGH	MED	1	3.657	301.0°	
MON-03	Monazite	HIGH	HIGH	1	3.302	286.7°	
SER-07	Serendibite	HIGH	LOW	1	4.164	214.3°	
MON-04	Monazite	HIGH	LOW	1	1.128	228.9°	
MON-05	Monazite	HIGH	LOW	1	1.208	48.2°	Near MON-06 (6.6 m); probable duplicate candidate, not merged
SER-08	Serendibite	HIGH	MED	2	1.449	297.1°	airborne/ remote anchor (1.22 km)
SER-09	Serendibite	HIGH	MED	1	1.497	24.6°	
MON-06	Monazite	HIGH	LOW	1	1.209	48.5°	Near MON-05 (6.6 m); probable duplicate candidate, not merged
MON-07	Monazite	HIGH	HIGH	1	2.099	49.0°	
SER-10	Serendibite	HIGH	MED	1	2.860	149.7°	

Duplicate/correction assessment. MON-05 and MON-06 are only 6.6 m apart and share commodity, Amount, Density and RIGEST; this is a probable duplicate candidate, but the prompt requires explicit evidence before merging, so both remain raw/operational observations. SER-01 and SER-02 are 11.6 m apart but disagree on Density (MED vs HIGH); they remain an unresolved target/duplicate ambiguity. No observations are voided.

Anchor quality. SER-04 and SER-08 were captured at approximately 1.24 km and 1.22 km altitude respectively. Their coordinates are valid commander-position anchors but should not be treated as deposit-center fixes; cluster geometry involving them has elevated uncertainty.

5. Boundary / perimeter observations

Sample	Range km	Bearing	Lat	Lon	Source line
B1	4.201	1.2°	REDACTED	REDACTED	1501
B2	4.206	310.0°	REDACTED	REDACTED	1503
B3	4.202	209.5°	REDACTED	REDACTED	1505
B4	4.203	146.0°	REDACTED	REDACTED	1521

B5	4.203	105.8°	REDACTED	REDACTED	1532
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DERIVED RESULT: the five yellow-perimeter anchors span 4.201-4.206 km from the practical center, mean 4.203 km with population SD 1.7 m. The tight agreement across widely separated bearings supports a near-circular visible perimeter for this sampled PML. All mapped deposit anchors lie inside the sampled perimeter. The extract does not establish that the commander systematically searched outside it, so no absence claim is made beyond the mapped observations.

6. Operational assessment and cluster candidates

Site-scale target pattern. Monazite and Serendibite dominate the mapped observations. Every recorded deposit is HIGH Amount; Density varies by commodity/node. MON-02 and SER-08 carry RIGEST 2, while all other observations carry RIGEST 1. These are visual estimates, not tested capacities.

Primary estimated six-rig-space candidate: SER-08 (RIGEST 2) + MON-03 (1) + SER-06 (1) + MON-02 (2). The recorded commander anchors span a maximum pairwise separation of ~2.21 km. This is a geometrically promising proposal only: SER-08 is an airborne anchor and no RIGCONF or timed production evidence exists.

East/southeast fallback cluster: QPX-02 + THO-01 + SER-04 + SER-10 span ~1.68 km maximum recorded-anchor separation and provide four RIGEST-1 observations. SER-04 is an airborne anchor, so exact ground spacing remains uncertain.

Operational limitation. Terrain/driveability, actual tested capacity, rig-retention distance, route deadhead time and sustained throughput are UNKNOWN in the supplied extract. The site should therefore remain a promising mapped prospect rather than a production-qualified Atlas site.

7. Production / raw-material observations

MEASURED: 10 MiningRefined events occur during the survey: 7 Monazite and 3 Serendibite. SRV Cargo records rise from 0 at launch to 10 by source line 1585, consistent with 10 t of refined cargo during this session.

LIMITATION: no \$rig/\$full cycle instrumentation links this output to specific deposits or defines deployment-to-full timing. Do not use these events to calculate deposit-specific tons/cycle or credits/hour.

RAW MATERIAL SIDE DROP: Selenium x1 at 03:15:19Z (source line 1513). This is one observation and does not establish a drop probability or pool.

8. Research implications

- MEASURED: mapped Monazite, Serendibite, Quartz Pyroxenite and Thortveitite observations within the selected example PML survey. Body-class and volcanism details are omitted from this public example.
- MEASURED/DERIVED: five visible-perimeter samples converge at 4.203 km mean radius with only 1.7 m population SD. This supports a strong site-specific geometric observation, not a universal PML-radius or generation-boundary claim.
- WORKING HYPOTHESIS / DATA-QUALITY LEAD: MON-05/MON-06 form a probable duplicate candidate at 6.6 m anchor separation; confirmation on revisit would improve unique-deposit counts and cluster interpretation.
- NEGATIVE / LIMITING EVIDENCE: no measured deposit footprint (\$area), no RIGCONF, no timed mining cycles, no depletion/reformation test, no terrain note, and no full PML commodity list were supplied.

9. Next highest-information action

RUN A GROUND-REACQUISITION + CAPACITY/PRODUCTION QUALIFICATION PASS ON THE PRIMARY 2+2+1+1 RIGEST CLUSTER.

Question. Do SER-08 / MON-03 / SER-06 / MON-02 form a genuinely usable six-rig cluster once the two RIGEST-2 estimates are physically tested and SER-08 is anchored on the ground?

Action. Reacquire SER-08 first and take a ground F10. At each cluster node, record RIGCONF after deliberately testing practical capacity. Then instrument several cycles with matched \$rig id:N / \$full id:N pairs and record refined output/cargo. If MON-05/MON-06 are encountered, explicitly confirm whether they are the same physical deposit.

Support would be: stable ground geometry, confirmed 2+2+1+1 practical capacity, repeatable cycle timing and attributable refined output. It would be weakened by materially different ground positions, failed 2-rig placement, duplicate collapse that changes routing, or excessive travel/collection overhead.

10. Suggested Galaxy Map bookmark

RHINO | Example Body | PML X | MON+SER

This uses the commander-supplied PML identity and the two dominant mapped target commodities. It deliberately omits temporary market-price tiers.

11. Raw-observation provenance / key source references

Evidence	Event	Source line(s)	What it establishes
Client build/session	Fileheader	1	gameversion 4.4.1.1; build r332841/r0
Body DSS/PML count	SAASignalsFound	972	Body-wide PML count omitted from public example
Body physical properties	Scan Detailed	975	Body-specific physical properties retained privately; omitted from public example.
Rhino launch	LaunchSRV	1495	SRV Rhino, player controlled
Practical center	SendText + Screenshot	1498-1499	PML CENTER then valid body Screenshot
Boundary samples	SendText + Screenshot	1500-1505, 1520-1521, 1531-1532	Five BOUNDARY samples
Survey end	SendText	1592	SURVEY COMPLETE
PML number	Commander supplied	this analysis	Original numbered PML withheld; shown publicly as PML X

Appendix A. Raw observation provenance

Coordinates below are preserved commander Screenshot positions associated with each deposit annotation chain. They are not claimed as exact deposit centers. No correction overlay has been applied because no explicit duplicate or wrong-target clarification was supplied.

ID	UTC dep	Lat	Lon	Alt km	Screenshot	dep/shot lines
SER-01	03:11:48Z	REDACTED	REDACTED	0.255	Screenshot_0053.bmp	1506/1508
SER-02	03:12:56Z	REDACTED	REDACTED	0.156	Screenshot_0054.bmp	1509/1511
SER-03	03:15:49Z	REDACTED	REDACTED	0.232	Screenshot_0055.bmp	1514/1516
QPX-01	03:17:37Z	REDACTED	REDACTED	0.181	Screenshot_0056.bmp	1517/1519
QPX-02	03:21:59Z	REDACTED	REDACTED	0.189	Screenshot_0058.bmp	1522/1524
THO-01	03:23:09Z	REDACTED	REDACTED	0.246	Screenshot_0059.bmp	1525/1527
SER-04	03:24:28Z	REDACTED	REDACTED	1.240	Screenshot_0060.bmp	1528/1530
MON-01	03:28:23Z	REDACTED	REDACTED	0.217	Screenshot_0062.bmp	1533/1535
SER-05	03:33:25Z	REDACTED	REDACTED	0.220	Screenshot_0063.bmp	1536/1538
MON-02	03:38:51Z	REDACTED	REDACTED	0.219	Screenshot_0064.bmp	1551/1553
SER-06	03:41:53Z	REDACTED	REDACTED	0.245	Screenshot_0065.bmp	1556/1558

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MON-03	03:43:16Z	REDACTED	REDACTED	0.191	Screenshot_0066.bmp	1559/1561
SER-07	03:49:10Z	REDACTED	REDACTED	0.637	Screenshot_0067.bmp	1562/1564
MON-04	03:57:44Z	REDACTED	REDACTED	0.240	Screenshot_0068.bmp	1565/1567
MON-05	04:01:11Z	REDACTED	REDACTED	0.189	Screenshot_0069.bmp	1568/1570
SER-08	04:05:05Z	REDACTED	REDACTED	1.217	Screenshot_0070.bmp	1573/1575
SER-09	04:08:39Z	REDACTED	REDACTED	0.224	Screenshot_0071.bmp	1578/1580
MON-06	04:09:45Z	REDACTED	REDACTED	0.201	Screenshot_0072.bmp	1581/1583
MON-07	04:12:05Z	REDACTED	REDACTED	0.229	Screenshot_0073.bmp	1586/1588
SER-10	04:16:09Z	REDACTED	REDACTED	0.222	Screenshot_0074.bmp	1589/1591

Appendix B. Data-integrity notes

- The Rhino Survey Extract is a reduced derivative of the preserved raw journal. This report treats retained source line references as provenance back to the original journal.
- All 20 raw deposit observations remain present. Probable/possible duplicate candidates are flagged but not merged without explicit commander confirmation.
- RIGEST values are preserved as estimates. No RIGEST value is upgraded to RIGCONF or measured surface area.
- Absolute coordinates, system/body identity, numbered PML identity, and body-specific fingerprint values were removed for this public example. Relative geometry is intentionally retained here for methodological illustration.
- The observed ~4.203 km yellow perimeter is a site-specific UI/perimeter measurement, not proof of a generation edge, scanner limit or universal PML radius.