SULFUR WIRE

Trading Handbook

What a North American sulfur trader or purchaser needs to know

Recovered elemental sulfur · forms and logistics · contracts and units · Alberta-Vancouver-Gulf-Tampa geography · trade flows · price formation · desk practice · risk

Open educational reference · Edition 2026.07 · sulfurwire.com

How to use this book

This handbook is a Sulfur Wire long-form knowledge product: an open educational desk reference for people who buy, sell, move, or analyze recovered elemental sulfur in and from North America. It is written for fertilizer procurement, producer marketing, physical traders, logistics planners, and analysts who already live in the commodity but want a single structured map of forms, contracts, geography, and risk.

It is **not** a substitute for a licensed price-reporting subscription, a charter party, a terminal manual, or counsel on sanctions and transport. Treat it as the fundamentals layer: what the molecules are, how they move, which public series are citeable, and where uncertainty should stay tagged.

> **PRA BOUNDARY**
>
> Sulfur Wire is not a price reporting agency. This handbook teaches how markets and assessments work. It does not reproduce licensed Argus, Platts/S&P Global, or CRU weekly assessment series. Where open news reprints or USGS summaries name a settlement or episodic print, the figure is attributed and treated as a public anchor, not a redistributed feed.

Editorial rules

- Prefer open, citable sources: USGS Mineral Commodity Summaries, Vancouver Fraser Port Authority (VFPA) statistics, Alberta Energy Regulator (AER) ST3 / sulphur balance reporting, Statistics Canada merchandise trade, company disclosures, BC Insight open pages, and attributed open Argus news reprints already in the public research pack.
- Keep numbers honest. Global balances and episodic price prints are often industry estimates. When precision is fake, the text says so.
- Use `UNCERTAIN` where the open record is incomplete.
- Distinguish **molten domestic** books from **formed dry-bulk export** books. Mixing Tampa long tons with Vancouver metric tonnes without conversion is a desk error, not a market view.
- Sulfur Wire observation classes (`verified_public`, `industry_estimate`, `platform_estimate`, `derived`) appear where the platform tags public series. They are trust labels, not price grades.

Companion tools on sulfurwire.com

Surface	Use
Inventory	Alberta stock path ending at last attributed observation
Exports	VFPA Vancouver annuals; reported/bridge monthlies
Netbacks	Origin-matched FOB + public freight lane arithmetic
Hubs / Facilities / Berths	Form, geography, static berth capability
Charts / Series	Public anchors and catalog with provenance

Outlook	Irregular public briefs
Methodology / License	Trust path and PRA boundary

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CHAPTER 1

Recovered elemental sulfur

Most commercial elemental sulfur traded today is **recovered**, not mined as a primary product. Oil refiners, sour-gas plants, and oil-sands upgraders strip hydrogen sulfide from hydrocarbon streams because product specifications and air permits require it. The elemental sulfur that leaves those plants is a byproduct of energy throughput. That single fact governs North American supply response, inventory behavior, and why FOB strength does not quickly call forth new Claus trains.

This chapter defines the molecule path a desk needs: acid gas to Claus to molten pit, oil-sands versus refinery recovery, US recovered supply in USGS terms, byproduct economics, the Frasch contrast, and how to read Sulfur Wire facility pages without inventing capacity that companies never disclosed.

1.1 What recovered sulfur is

Recovered elemental sulfur (often still called brimstone in older trade speech) is solid or molten S8 produced from H2S that was removed from sour gas, refinery acid gas, or oil-sands upgrader acid gas. It is chemically the same element as Frasch-mined sulfur. Commercially it differs because:

- Production rate follows hydrocarbon throughput and gas composition, not a sulfur price signal.
- Operators must manage H2S and SO2 whether sulfur markets are soft or tight.
- Marketing choices begin after recovery: sell molten, pour to block, remelt, or form solids for rail and ocean export.

> **DESK DEFINITION**
>
> Recovered sulfur is the elemental sulfur output of gas treating and Claus (or equivalent) recovery units. It is not mined Frasch production and not sulfuric acid. Acid plants burn elemental sulfur or process other sulfur-bearing feeds; they are demand, not this supply definition.

1.2 Acid gas and the Claus path

Sour gas and many refinery streams contain H2S. Amine treating concentrates H2S into an acid-gas stream. The Claus process burns a portion of that H2S to SO2, then catalytically reacts H2S and SO2 to form elemental sulfur and water. Liquid sulfur drains to pits or tanks. Tail-gas treating units raise overall recovery to meet emissions permits.

Traders do not operate Claus trains, but they price the commodity those trains create. A short process map prevents confused conversations with operations and HSE:

1. **Amine / acid gas:** Concentrates H2S. Rate tracks sour throughput.
2. **Claus furnace and converters:** Produce elemental sulfur. Recovery efficiency is a plant design and permit topic.
3. **Tail-gas treating:** Captures residual sulfur compounds so the stack meets limits.
4. **Molten pit / tank:** Marketing starts here: degas, sell molten, pour to block, or form.

Because Claus rates follow hydrocarbon throughput, sulfur output is a byproduct schedule. A refinery running more sour crude may recover more sulfur. An oil-sands upgrader at high utilization recovers more

than during a turnaround. Sulfur price spikes do not, by themselves, turn on idle Claus capacity if the host hydrocarbon plant is down.

Process overview for market readers: Sulfur Wire topic **Claus process basics**; engineering detail belongs in process texts, not this handbook.

1.3 Oil-sands pathway

Athabasca bitumen is naturally sour. Public assays for some mineable streams show sulfur on the order of several weight percent in the bitumen itself. When operators upgrade bitumen to synthetic crude oil (SCO), they remove sulfur from intermediate streams to meet SCO product specifications and air emissions rules. Removed sulfur becomes elemental brimstone through Claus and related recovery units.

Not every oil-sands facility recovers elemental sulfur on site. Mines that produce diluted bitumen without an upgrader leave sulfur in the bitumen barrel until it is processed at a refinery or upgrader elsewhere. Integrated mining-upgrading complexes such as Suncor Base Plant, Syncrude Mildred Lake, and CNRL Horizon recover sulfur beside the upgrader. Scotford Upgrader near Edmonton recovers sulfur from AOSP bitumen shipped south by pipeline.

> **LOGISTICS CONSEQUENCE**
>
> If forming, rail, or markets fail to clear recovered tonnes, upgraders face storage limits. Pour-to-block is the industry answer to that mismatch. Remelt later converts blocks back into marketable molten for forming or tank-car sales. Sulfur logistics investments (South Cheecham forming, Heartland remelt, Sultran terminals) are strategic even though sulfur revenue is secondary to SCO.

Alberta provincial inventory reporting (AER sulphur balance / ST3 family products, as cited in open trade press) is the public scoreboard for how much recovered sulfur sits in stock versus how much moves to forming and Vancouver. Chapter 4 covers the July 2025 inventory print near 11.66 Mt and the remelt geography that can draw it.

1.4 US recovered sulfur

The United States recovers large volumes of elemental sulfur at refineries and gas plants, especially along the Gulf Coast. USGS Mineral Commodity Summaries provide the open national production, import, and Tampa molten contract narrative that desks can cite without a PRA subscription.

Key USGS-framed facts for handbook use:

- US production is overwhelmingly recovered, not Frasch.
- The United States both produces and imports elemental sulfur. Canada has long supplied the majority of US elemental sulfur imports in USGS source tables for recent multi-year windows.
- USGS tracks Tampa, Florida contract prices for molten sulfur as a domestic benchmark series (USD per long ton). That series is an open episodic path, not a redistributed weekly PRA feed.
- State-level production concentration in Louisiana and Texas explains why US Gulf FOB solid assessments matter for global dry bulk even when Tampa molten contracts dominate fertilizer headlines.

A large share of US molecules never see a Panamax hatch. They move by tank car into domestic acid and phosphate chains. That domestic gravity is why Canadian Pacific granular and US Gulf granular can both be “North American” yet clear into different buyer sets in the same month.

USGS Mineral Commodity Summaries (sulfur chapter) and USGS Sulfur Statistics and Information page. Record the MCS edition year beside any cited production or Tampa figure.

1.5 Byproduct economics

Byproduct economics explain the 2021-2026 price path better than a textbook supply curve:

1. **Inelastic short-cycle supply.** Claus output tracks oil, gas, and upgrading rates. Low sulfur prices produce block pours and inventory builds, not plant shutdowns that eliminate H2S recovery.
2. **Semi-elastic stock response.** Remelt and forming utilization rise when FOB netbacks cover inland costs often cited above $150/t all-in for Canadian export chains. That response is capacity-limited.
3. **Demand is phosphate- and acid-led.** Fertilizer and industrial acid margins decide how hard buyers chase tonnes. HPAL and metals leaching add industrial demand in some years.
4. **No deep futures hedge.** Physical bilateral contracts and PRA assessments carry price discovery. Chapter 6 covers why North America lacks a clearing standard.

Corporate behavior follows the same logic. Midstream firms invest in forming and remelt under take-or-pay structures that monetize handling fees even when producers' FOB realizations are thin. Producers decide pour versus remelt on netback. Traders and fertilizer buyers decide inventory on phosphate margins and CFR alternatives. None of these agents can order a short-cycle increase in Claus output the way a shale producer might add a rig.

> **UNCERTAIN**
>
> Facility-level remelt utilization and exact Claus recovery factors are rarely public at high frequency. Treat nameplate t/d forming figures as capability disclosures, not confirmed annual Mt shipped, unless a company states throughput.

1.6 Frasch contrast

Frasch sulfur was mined by injecting superheated water into native sulfur deposits and lifting molten sulfur. It was once a primary supply source for the US Gulf and other basins. Modern North American elemental sulfur trade is dominated by recovered byproduct. Frasch remains useful as a historical contrast:

Dimension	Recovered (today)	Frasch (historical)
Driver	Hydrocarbon throughput and permits	Sulfur price and deposit economics
Location	Refineries, gas plants, upgraders	Native sulfur deposits
Inventory	Blocks, pits, tanks as logistics buffer	Mine and stockpile as primary product
Quality debate	H2S, degassing, ash, color grades	Ash and carbon often central historically
Desk implication	Watch energy rates and remelt	Watch mine restarts (rare today)

Do not treat Frasch as a live North American swing supplier in 2020s desk models unless a specific project reappears with verified production. Open USGS tables already frame US supply as recovered-dominant.

1.7 Reading Sulfur Wire facility pages

Facility pages on sulfurwire.com summarize public operator disclosures for producers, formers, remelt sites, and demand hubs. Use them with a strict reading protocol:

1. **Existence vs sales.** Separate "sulfur recovery exists at this site" from "this site discloses Mt/a sales." Many pages correctly show recovery without a public sales volume.

2. **Nameplate vs throughput.** Forming t/d figures (for example South Cheecham about 4,400 t/d, Heartland 4,500 t/d forming) are capability. Annual Mt depends on feedstock, remelt campaigns, and price.
3. **Provenance tags.** `verified_public` means a citable open source. `industry_estimate` means trade-press or secondary attribution. `platform_estimate` and `derived` are Sulfur Wire constructions - not third-party assessments.
4. **Form and Incoterm.** A Tampa phosphate demand hub page is not a Vancouver FOB solid export page. Keep books separate.
5. **Static berths.** Berth specs are capability sheets, not live AIS or stem boards.

FACILITY PAGE CHECKLIST

- ☐ Molecule source noted: gas, refinery, oil sands, remelt
- ☐ Form out named: molten, prill, pastille, granule, crushed
- ☐ Public capacity figure and date written
- ☐ Logistics path: rail carrier, Vancouver, Gulf, Tampa
- ☐ Observation class on any tonnage
- ☐ What is **not** disclosed left blank (no invention)

Print and mark. Leave blank if UNCERTAIN.

1.8 Why this chapter matters for later chapters

Forms and logistics (Chapter 2) start from molten pits. Contracts and units (Chapter 3) price byproduct tonnes under FOB, CFR, CIF, and DEL. Geography (Chapter 4) maps where Alberta blocks, Heartland remelt, and Vancouver berths sit. Trade flows and price formation (Chapters 5-6) only make sense once you accept that North American sulfur supply is inelastic to price in the short cycle.

Companion topics on sulfurwire.com: **Recovered sulfur byproduct economics, Oil sands sulfur, Claus process basics, Remelt and block storage.**

CHAPTER 2

Forms and logistics

Recovered sulfur leaves Claus plants as hot molten liquid. Fertilizer plants, acid burners, and ocean vessels generally cannot take that liquid directly across the Pacific. Forming freezes molten sulfur into solid particles that store in piles, load into hopper cars, and pour into ship holds with manageable dust and safety risk. This chapter covers molten trade, solid forms, degassing, Canada and US chains, quality grades, vessel parcels, and contract hygiene.

2.1 Molten sulfur

Molten sulfur is liquid elemental sulfur held above its freezing point in heated tanks, tank cars, and short-haul logistics systems. In North America it is the domestic workhorse into Florida phosphate and many industrial acid plants.

Commercial traits:

- Moves by insulated/heated rail tank car or short pipeline/truck loops near plants.
- Typically priced in USD per long ton on Tampa delivered (DEL) quarterly structures, not USD per metric tonne FOB Vancouver.
- Cannot be the default Pacific export form. Ocean dry-bulk sulfur is formed solid.
- H2S content and temperature control dominate specifications and HSE practice.

> **TWO BOOKS**
>
> Keep a **molten domestic** book and a **formed dry-bulk export** book. Mixing Tampa long tons delivered with Vancouver metric tonnes FOB without conversion and basis adjustment is a desk error, not a market view.

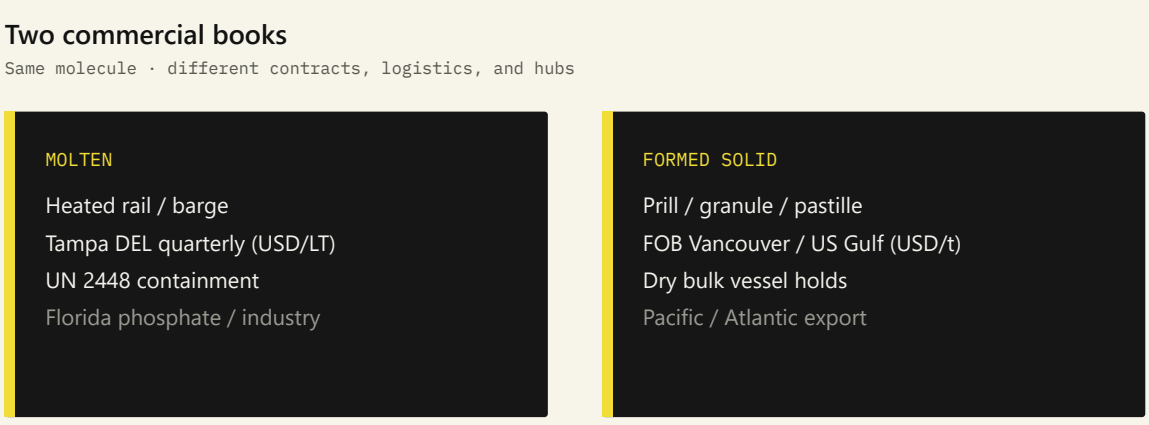

Figure · Molten vs formed commercial books · schematic

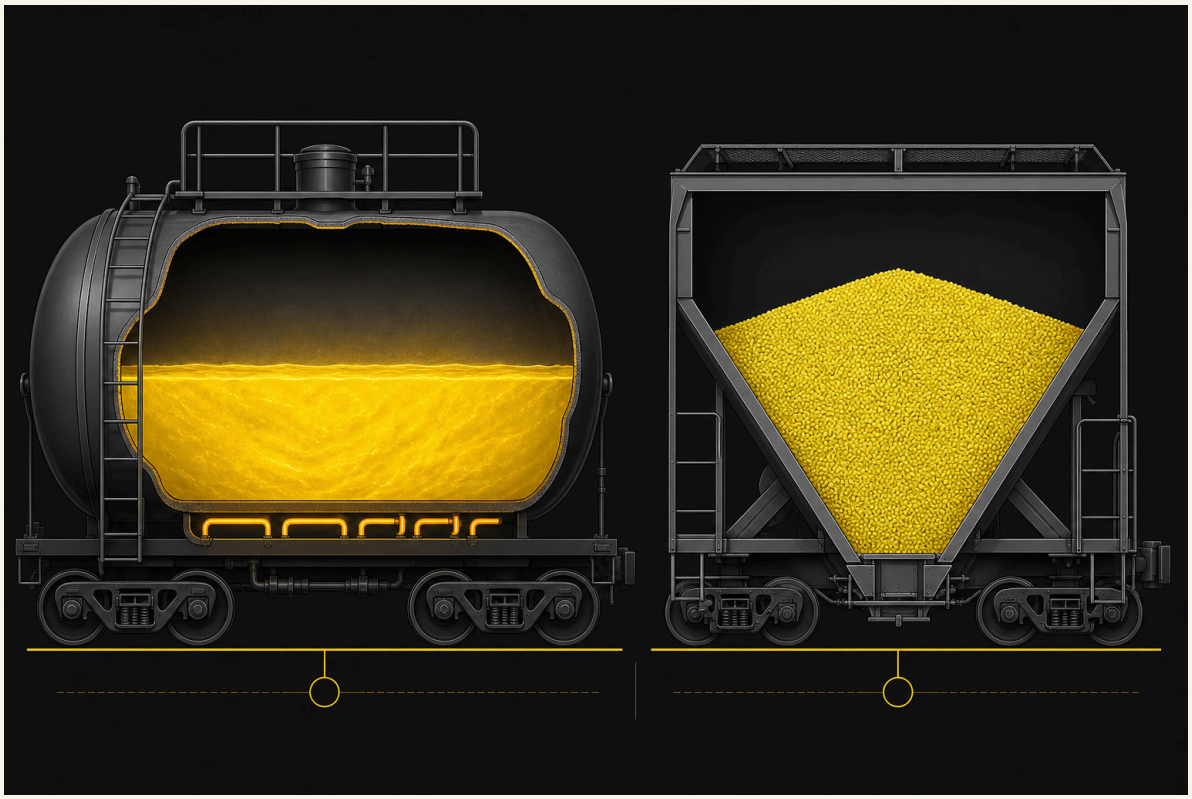

Figure · Heated molten logistics vs formed solid handling · illustrative

2.2 Solid forms: prill, granule, pastille, slate, crushed

Common solid forms:

1. **Prills.** Small spheres from droplet solidification. Wet-prill systems solidify droplets in water before drying; dry systems use air. Heartland Sulphur publicly associates Enersul Devco II WetPrill technology with its Alberta terminal.
2. **Pastilles / pellets.** Belt pastillators produce flattened droplets with controlled size.
3. **Granules.** Specialized granulators create premium handling sizes. Keyera's Strachan upgrade historically cited Brimrock forming and degassing for premium granules.
4. **Slate.** Older belt-cooling fragments. Still appears in some inventories and secondary handling.
5. **Crushed / remelt feed.** Block sulfur crushed for remelt campaigns. Not a finished export grade until remelted and formed (or sold as specified crushed bulk where contracts allow).

Buyers specify size distribution, moisture, acidity, and ash because burner and handling equipment is tuned to a form. Terminal acceptance and vessel stowage also assume a form family.

2.3 Degassing

Freshly recovered molten sulfur can contain dissolved H2S and other sulfur species that release gas during storage and handling. Degassing reduces H2S to levels acceptable for tank-car movement, forming, and customer specs.

Desk points:

- Degassing is often a gate before forming or molten sale, not an optional polish.
- Spec sheets and terminal manuals set limits; survey practice matters at loadport and discharge.

- Safety culture around molten sulfur and H2S is non-negotiable. Commercial urgency does not override HSE.

> **UNCERTAIN**
>
> Exact H2S residual distributions by facility are rarely published as a continuous public series. Treat degassing capability notes on facility pages as qualitative unless a company publishes a numeric spec.

2.4 Form comparison

Form	Typical path	Strength	Constraint
Molten	Rail tank car to acid/phosphate	Direct burner feed; Tampa contract core	Heated logistics; not Pacific dry bulk
Prill	Forming to rail to Vancouver	High volume export workhorse	Dust, moisture, size control
Pastille	Belt former to rail/export	Uniform handling	Technology and customer acceptance
Granule	Premium forming lines	Handling and burner preference	Higher forming cost / narrower capacity
Slate	Legacy cooling	Simple solid	Fragment handling; less preferred
Crushed	Block reclaim to remelt	Unlocks inventory	Not finished grade until remelt/form

2.5 Canada export chain

Western Canada's seaborne elemental sulfur chain is a sequenced midstream:

Claus recovery -> **molten storage** -> **degas** -> **form** (or **remelt** -> **form**) -> **rail (CN / CPKC)** -> **Vancouver loadout (PCT Port Moody, Vancouver Wharves)** -> **vessel**.

Geography clusters around two ideas: capture sulfur near Fort McMurray producers, and capture sulfur near Edmonton/Heartland for remelt and export staging.

- **South Cheecham** (Keyera / Enbridge area forming): about 4,400 tonnes per day forming capacity near the oil-sands region (public operator / trade disclosures; online from Q3 2023 in public commentary).
- **Heartland**: about 4,500 t/d forming for offshore markets, plus remelt for crushed bulk and molten tank-car outbound capability.
- **Sultran** coordinates terminal logistics at Pacific Coast Terminals and Vancouver Wharves.

Export-chain costs often cited above $150/t mean Vancouver is idle when FOB is soft and a release valve for provincial stocks when FOB is firm. Wildfires, rail congestion, and forming outages show up as delayed stems even when a berth looks free.

Sultran logistics/terminal pages; PCT and Vancouver Wharves public berth sheets; VFPA cargo statistics for annual sulphur tonnes.

2.6 US chain

US recovered sulfur follows a different gravity:

1. **Gulf recovery** at refineries and gas plants.
2. **Domestic molten** into Florida phosphate (Tampa quarterly DEL contracts) and industrial consumers by tank car.
3. **Solid export** where forming and terminal access exist - FOB US Gulf granular competing into Atlantic and, in shock years, unusual destinations.
4. **Canadian molten imports** by rail into US consumers - a separate inland book from FOB Vancouver solids.

Producers without Gulf forming stay tied to domestic liquid economics. Producers with forming can divert to dry-bulk export when CFR nets pay. Chapter 5 covers 2026 diversion episodes attributed in open trade press.

2.7 Quality: bright and dark

Trade speech still uses **bright** and **dark** (and related color/ash language) for elemental sulfur appearance and impurity. Recovered sulfur is usually cleaner than older mined debates implied, but contracts still care about:

- Color / brightness relative to buyer specs
- Ash and carbonaceous matter
- Acidity and moisture
- Size distribution for formed product
- H2S / degassing status for molten and some solids

> **QUALITY PRACTICE**
>
> Write the form, size band, and H2S/degassing requirement into the stem note and the purchase contract. “Canadian sulfur” is not a specification. Survey and rejection clauses belong in the commercial file before the vessel is fixed.

2.8 Vessel parcels (30 kt to 65 kt)

Canadian seaborne elemental sulfur clears almost entirely through the Port of Vancouver system. Commercial parcels are often described in the 30,000-65,000 tonne range on Supramax and Panamax sulfur carriers, subject to draft, LOA, beam, air draft, and cargo program. Handysize tonnage appears on some regional stems.

Operational loading is not the peak loader nameplate alone. Laytime, shift structure, rain, dust control, and rail reclaim decide whether a laycan survives. Chapter 4 details PCT Berth 2 and Vancouver Wharves Berth 4 public specs.

2.9 Contract hygiene

> **CONTRACT HYGIENE**
>
> Before you commit tonnes or a vessel: (1) Form and size distribution. (2) Incoterm and named place. (3) Unit: MT vs LT. (4) Quality and survey. (5) Laycan and berth nomination path. (6) Demurrage / dispatch. (7) Force

> majeure and rail/terminal events. (8) Sanctions and end-use language if relevant. (9) Payment security. (10) Confirm terminal manual overrides any website summary.

2.10 Forming map for desk notes

When annotating a weekly pack, record for each Canadian stem:

- Origin former or remelt site (if known)
- Form (prill / pastille / granule)
- Rail path assumption (CN vs CPKC where public)
- Loadport (PCT vs Vancouver Wharves)
- Parcel size band and vessel class
- Whether tonnes are current recovery or remelted inventory

That annotation prevents treating all Vancouver FOB prints as identical molecules with identical inland cost.

Companion topics: **Forming explained**, **Molten vs formed trade**, **Vessel and berth guide**.

CHAPTER 3

Units and contracts

Sulfur desks lose money on unit and Incoterm mistakes before they lose money on views. Tampa molten quarterly contracts in USD per long ton delivered are not Vancouver FOB granular in USD per metric tonne. Middle East OSPs and spot tenders sit in yet another commercial dialect. This chapter fixes the conversion arithmetic, Incoterm vocabulary, hub contract styles, HS 2503 trade coding, take-or-pay midstream structures, and a desk conversion checklist.

3.1 Metric tonne vs long ton

Exact desk factor:

1 long ton (LT) = 1.0160469088 metric tonnes (MT).

Equivalently, 1 MT 0.9842065276 LT.

If a Tampa print is $/LT and you want an approximate $/MT for the **same** molten delivered product, divide by 1.0160469088 (or multiply by $\frac{1}{1.0160469088}$). This does **not** turn Tampa molten DEL into Vancouver FOB solid. Form, logistics, and Incoterm still differ.

> **CONVERSION TRAP**
>
> Converting LT to MT adjusts mass units only. It does not convert DEL to FOB, molten to granular, or Florida delivered to Pacific loadport. Always state unit, form, and Incoterm in the same cell of a spreadsheet.

Sulfur Wire Units page uses the same exact LT/MT factor for helper math.

3.2 Incoterms that matter

Sulfur trade speech leans on a short Incoterms set. Confirm the ICC edition year in the contract; the labels below are desk shorthand, not legal advice.

Term	Desk meaning in sulfur
FOB	Free on Board at named loadport. Seller delivers over ship's rail/on board; buyer takes ocean freight and insurance. Vancouver FOB granular and US Gulf FOB granular are the core NA solid export quotes.
CFR	Cost and Freight to named discharge port. Seller pays freight; insurance remains buyer unless otherwise stated. Common in Asia tender language.
CIF	Cost, Insurance, and Freight. Seller adds insurance. Less universal than CFR in some sulfur tenders, but appears.
DEL / Delivered	Delivered to buyer location. Tampa molten quarterly contracts are typically thought of as delivered into Florida phosphate logistics (USD/LT). Exact named place belongs in the contract.

Named place is part of the term. "FOB" without a port is incomplete. "CFR China" without a port range is a conversation, not a fixture.

3.3 Hub contract styles

3.3.1 Vancouver quarterly / FOB solid

Pacific Canadian formed sulfur clears as dry-bulk FOB Vancouver (Port Moody / North Vancouver system). Commercial structures include quarterly negotiations, spot stems, and term liftings against producer or marketer programs. Assessments that PRAs publish for FOB Vancouver granular are licensed products. Sulfur Wire labels the family `SR-VAN-FOB-G` for internal series mapping and does not redistribute weekly assessment tapes.

3.3.2 Tampa molten quarterly

Florida phosphate offtake anchors US domestic molten. USGS Mineral Commodity Summaries narrate Tampa contract paths in USD per long ton. Open Argus news reprints sometimes name quarterly settlements (for example record prints discussed for 2026 in trade press). Treat those as episodic public anchors with attribution - not a substitute for a licensed feed.

Platform labels: `SR-TAMPA-Q`, `SR-TAMPA-MOLTEN`.

3.3.3 US Gulf FOB solid

Where Gulf refineries have forming and terminal access, granular FOB US Gulf competes into Atlantic and diversion destinations. Platts subscriber notes in 2025-2026 described updates to Americas sulfur assessments including FOB US Gulf dry bulk context. Platform code `SR-GULF-FOB-G` maps to that export spot family. USGS FOB mine/plant domestic averages are a different series (`SR-US-DOM-AVG` on the platform) - do not conflate them with seaborne Gulf export spot.

3.3.4 Middle East OSP

Producer official selling prices (OSPs) and related FOB Middle East structures are central to global phosphate sulfur procurement. Platform label `SR-ME-FOB` marks the family for netback arithmetic. OSPs are not North American assessments; they are the competing origin that Vancouver and Gulf solids bid against after freight and risk.

3.3.5 Spot tenders

Buyers (especially in Asia, Brazil, and Africa) issue spot tenders stating form, quantity, laycan, and CFR/FOB basis. Sellers offer against PRA marks, OSP references, and freight. Tender awards in open press are episodic; they are not a continuous curve.

3.4 Basis vocabulary

Basis is the spread between two hubs, forms, or Incoterms. For North American dry bulk, Vancouver FOB versus US Gulf FOB tells exporters and importers which Pacific/Atlantic origin is tighter after freight. Platform index `SR-BASIS-VG` is Vancouver mid minus Gulf mid on the solid FOB pair.

Other basis language you will hear:

- Form basis: molten DEL vs solid FOB
- Freight basis: FOB vs CFR for a stated lane
- Quality basis: bright/dark or size penalties
- Timing basis: prompt stem vs next-quarter

> **UNCERTAIN**
>
> A continuous public Gulf-Vancouver weekly spread series is not an open government product. Use attributed snapshots and licensed PRA series (under license) for trading marks. Sulfur Wire charts public anchors with gaps where densified estimates are withheld.

3.5 HS 2503

Harmonized System heading **2503** covers sulfur of all kinds (other than sublimed, precipitated, or colloidal in narrower subheads - check the national tariff schedule for the exact statistical code you pull).

Desk uses:

- Statistics Canada merchandise trade for Canadian exports by destination
- US trade data and UN Comtrade / WITS for bilateral elemental sulfur flows
- Cross-check against VFPA Vancouver sulphur tonnes (loadport system of record for Pacific solids)

HS data can diverge from port statistics because of classification, routing, timing, and coverage. When they disagree, record both and investigate - do not silently average.

Topic **HS 2503 exports** on sulfurwire.com; always note the pull date and reporter nation.

3.6 Take-or-pay

Midstream forming, remelt, and terminal arrangements often use take-or-pay or minimum volume commitments. Producers and marketers pay for capacity whether or not FOB netbacks are attractive that month. Implications:

- Handling fees can stay alive in soft markets while producer realizations collapse.
- Remelt campaigns still need positive variable netbacks above cash costs to run hard.
- Capacity announcements (t/d) matter for optionality even when current utilization is low.

Take-or-pay is not a sulfur price assessment. It is a logistics contract feature that shapes who carries fixed cost through the cycle.

3.7 Desk conversion checklist

Before comparing any two numbers, mark each box:

DESK CONVERSION CHECKLIST

- ☐ Hub, form, Incoterm, unit, currency, and date written on one line
- ☐ LT ↔ MT conversion applied with 1.0160469088 when bases match
- ☐ Freight added/subtracted only on a stated lane with stated $/t
- ☐ Tampa DEL molten kept separate from Van / Gulf / ME FOB solids
- ☐ Source tagged: USGS MCS, VFPA, StatCan, open news, or licensed PRA (not redistributed here)
- ☐ Mixed bases split into separate cells

Print and mark. Leave blank if UNCERTAIN.

ONE-LINE STAMP

Example stamp: “Tampa Q3 molten DEL USD/LT (USGS/Argus open cite, 2026) - convert to USD/MT before any solid FOB compare; still not Vancouver FOB.”

CHAPTER 4

North American geography

North American elemental sulfur is a map of pits, blocks, formers, rail, berths, and phosphate plants - not a single hub. This chapter lays out Alberta inventory and remelt, forming geography, rail, Vancouver terminals and VFPA tonnes, US Gulf and Martin Midstream-class logistics, Florida/Tampa demand, a hub mental model, how hubs interact in a week, and secondary US nodes.

4.1 Alberta inventory

Alberta's provincial sulfur inventory is the clearest public stock concept for Canadian recovered sulfur. Open trade press citing AER data reported a July 2025 closing inventory near **11.66 Mt**, about 3% lower year on year, and the lowest since May 2019 in that recounting. The draw coincided with stronger Vancouver FOB averages in the January-July 2025 window and solid exports of about 2.04 Mt in the same months (Argus open reporting).

> **HOW TO HOLD THE NUMBER**
>
> Treat 11.66 Mt (Jul 2025) as an attributed observation with a date stamp. Do not flat-line later months as if the stock were still current. Pull AER ST3 / sulphur balance yourself for anything after the last attributed print. On Sulfur Wire, the figure may carry an `industry_estimate` tag when it arrives via trade press rather than a direct AER file ingest.

Blocks need crush, remelt, forming, terminal acceptance, and vessels before they load. Working piles at forming plants and on-dock stocks move faster than remote oil-sands blocks. Wildfire seasons and rail congestion can interrupt draws even when prices are high. CRU commentary has discussed on the order of 1.5 Mt of Canadian remelted sales across 2025-2030 if prices and logistics cooperate - a path that releases stock while Claus nameplate stays tied to hydrocarbon throughput.

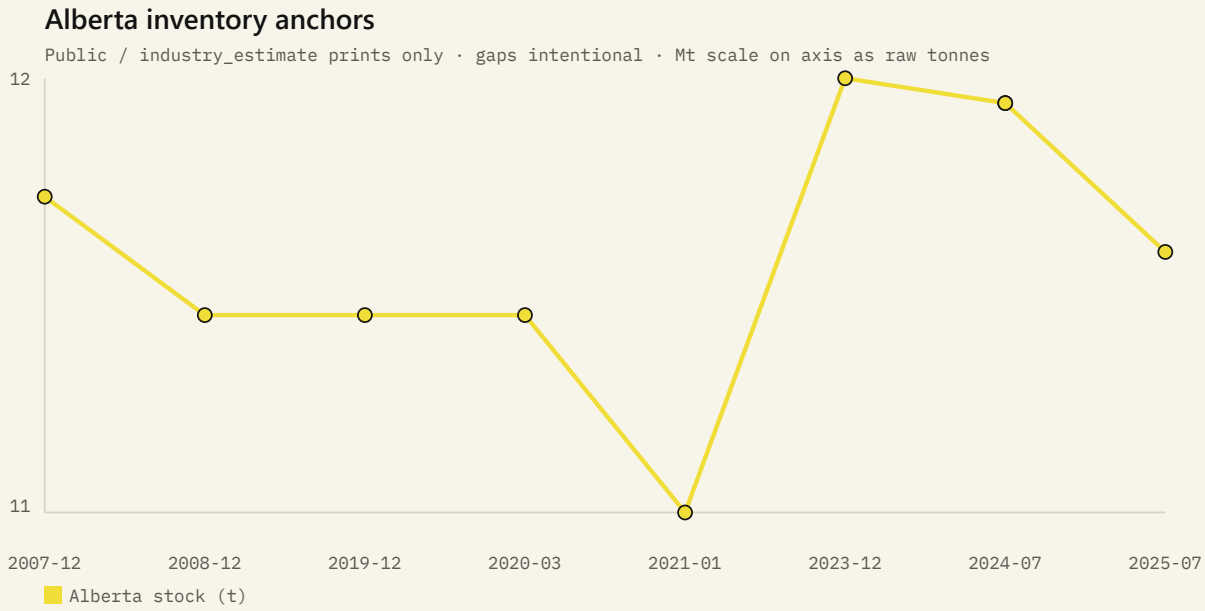

Figure · Alberta inventory anchors (public / industry_estimate prints) · Mt · gaps intentional

AER statistical reports (ST3 / sulphur balance family); Argus open news recounting July 2025 inventory; Sulfur Wire Inventory surface.

4.2 Remelt and Heartland

Block storage is the oil-sands answer to a logistics mismatch. When upgraders recover more sulfur than forming plants, rail paths, and Vancouver vessels can clear, operators pour molten sulfur into engineered outdoor blocks. Heartland and trade sources still describe on the order of 10 Mt of oil-sands-related block material inside Alberta's broader inventory story, alongside AER-linked provincial totals near the low-to-mid 11 Mt range in 2025 reporting.

Heartland Sulphur's 2025-2026 announcements are the clearest public remelt case study: de-bottlenecking crushed-bulk remelt toward roughly 700 t/d, with engineering toward an additional 1,000 t/d aiming for roughly 1,500 t/d (Argus) to 1,700 t/d (CRU) by end-2026 in open commentary. Forming capacity at the same site is stated at 4,500 t/d for offshore markets, plus molten tank-car outbound capability.

For traders, remelt is delayed supply with an option-like payoff. Molecules already exist in inventory. Monthly inventory changes are the scoreboard; remelt ticket rates and forming utilization are the engines.

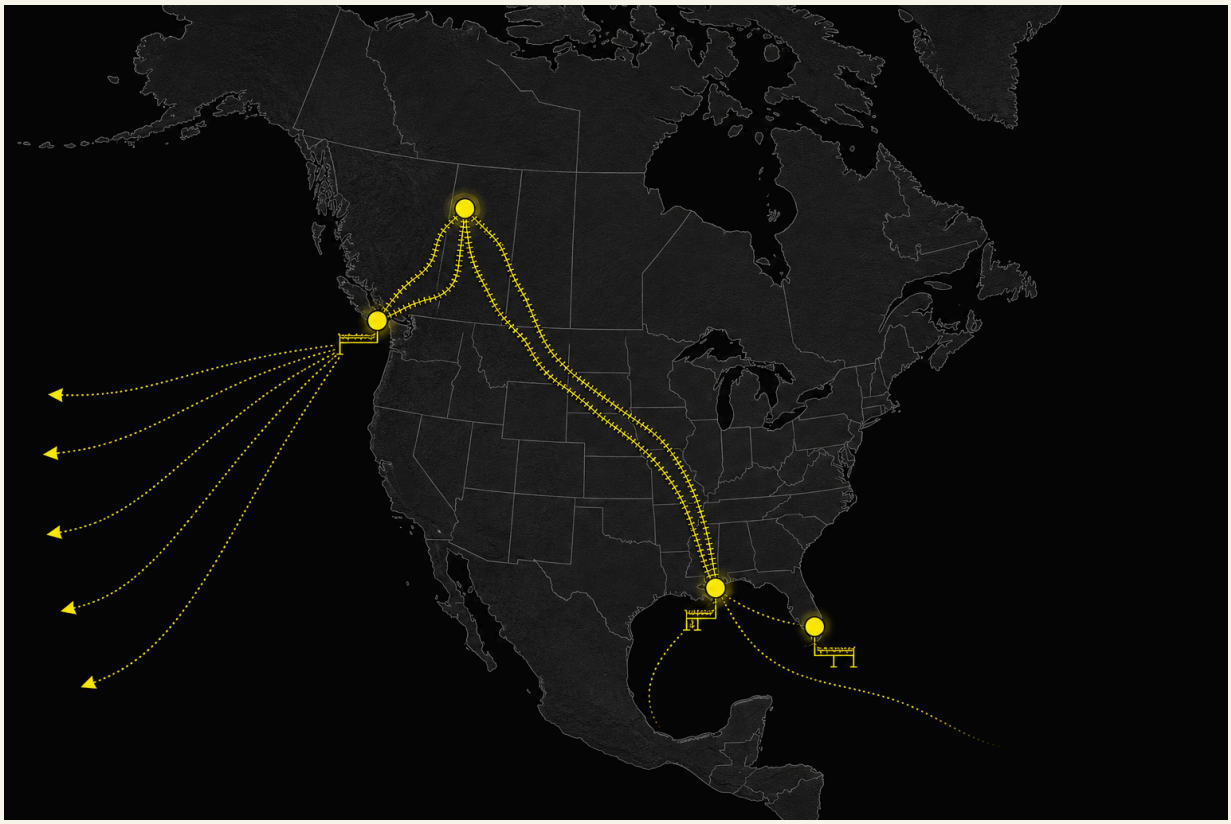

Figure · North American sulfur nodes · Alberta, Vancouver, US Gulf, Tampa · illustrative map

Alberta → Vancouver export chain

Capability path · not live AIS

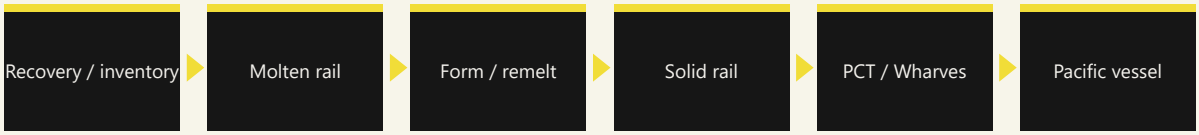

Figure · Alberta → Vancouver export chain · capability path, not live AIS

4.3 Forming geography

Node	Public figure	Role
South Cheecham	4,400 t/d forming	Near Fort McMurray producers; online Q3 2023 in public commentary; Keyera/Enbridge area forming
Heartland	4,500 t/d forming	Edmonton/Heartland staging; remelt + forming + molten outbound

Other Alberta/BC formers	Varies	Sultran/producer network sites feeding CN and CPKC unit trains
PCT Port Moody	Berth loadout	Primary sulfur dry-bulk loadport in VFPA system
Vancouver Wharves	Berth 4 load-out	North Vancouver dual-quadrant sulfur loading

Nameplate t/d is not annual Mt. Throughput is customer- and price-dependent.

4.4 Rail

CN and CPKC rail programs move formed sulfur from Alberta (and related origins) to Port Moody and North Vancouver. Rail is the binding constraint as often as berths:

- Car cycles and train length programs set how fast remelt can become stem-ready tonnes.
- Northern Alberta weather and wildfire seasons interrupt loadings upstream of an empty berth.
- On-dock stockpiles buffer some mismatch between train arrivals and vessel laydays.

Desk practice: when a Vancouver FOB market looks “tight,” ask whether the tightness is berth, rail, former, or remelt.

4.5 PCT Port Moody berth specs

Pacific Coast Terminals Berth 2 handles bulk sulfur (and potash). Public Sultran/PCT-style specs used as fixture screens include:

- Maximum low-water depth about 11.9 m
- LOA roughly 142 m to 240 m
- Beam up to 32.5 m
- Single-quadrant (one gang) shiploader
- Peak load rates around 2,500-3,500 wet metric tonnes per hour from a single source and 4,500-5,500 wmt/hr from a dual source
- Average gross shift tonnages on the order of 15,000-25,000 wmt depending on single versus dual source
- No limiting air draft on the cited PCT sheet (confirm current manual)

Always reconfirm with the terminal before fixing; dredging and operating practices change.

4.6 Vancouver Wharves

Vancouver Wharves Berth 4 offers dual-quadrant (two gang) loading with about 12.8 m depth and maximum LOA near 230 m. Peak rates in public tables run roughly 1,800-2,300 wmt/hr single source and 2,500-3,500 wmt/hr dual source, with corresponding shift averages. Air draft limits apply (about 22.7 m waterline to hatch coaming in Sultran tables).

Sultran coordinates loadings at both PCT and Vancouver Wharves. Agents allocate stems by stockpile ownership, berth windows, and rail reclaim.

4.7 VFPA annual sulphur tonnes

Vancouver Fraser Port Authority statistics overviews are the cleanest public loadport series for Canadian Pacific elemental sulfur:

Year	Sulphur (Mt)	Note

2023	3.10	Authority / trade summaries; dry-bulk growth year
2024	3.35	About +7.9% year on year in VFPA-framed figures
2025	3.51	About +4.8%; inside a record overall cargo year (170.4 MMT)

From the 2021 trough (2.29 Mt) to 2025, Vancouver sulphur rose by roughly 1.2 Mt. That growth is a logistics story as much as a price story.

VFPA Statistics Overview PDFs (record the PDF edition date beside each annual point). Cross-check StatCan HS 2503 for national export context.

4.8 US Gulf and Martin-class midstream

US Gulf recovered sulfur concentrates in Louisiana and Texas refining and gas treating. Midstream names in the molten and terminal space (including Martin Midstream and peer logistics operators in public industry maps) connect refineries to domestic consumers and, where infrastructure exists, to solid export pathways.

Desk split:

- **Captive / domestic molten** into acid and phosphate
- **FOB Gulf solid** where forming and docks allow seaborne stems

During 2026 global tightness, open Argus reporting described very high spot Gulf export indications and diversions to unusual destinations - a reminder that Gulf solid is a swing export door, not the whole US production base.

4.9 Florida / Tampa

Tampa is the demand hub language for US molten sulfur into Florida phosphate. USGS narrates Tampa contract prices in USD/LT. The hub is not a Vancouver-style dry-bulk loadport story. Inland US logistics, phosphate operating rates, and quarterly contract settlements dominate.

Platform hub pages link `SR-TAMPA-Q` / `SR-TAMPA-MOLTEN`. Convert units before any Pacific compare.

4.10 Hub mental model

Hub	Form	Unit / basis	Watch
Alberta	Blocks / molten	Mt inventory	AER stock, remelt tickets
Vancouver	Solid export	USD/t FOB	VFPA tonnes, stems, rail
US Gulf	Molten + solid	USD/t FOB solid; domestic molten separate	Refinery rates, forming, docks
Tampa	Molten DEL	USD/LT	Phosphate ops, quarterly settles
Middle East	Solid FOB/OSP	USD/t FOB	OSP, freight, chokepoints

4.11 How the hubs interact in a week

A practical five-step sequence for a desk week (not a trading algorithm):

1. **Step 1 - Stock and recovery.** Note last Alberta inventory observation and any public upgrader/refinery outage news. Ask whether inland tonnes are building or drawing.

2. **Step 2 - Forming and rail.** Check whether remelt/forming commentary and rail fluidity support stem-ready solids. A free berth with empty reclaim is not export supply.
3. **Step 3 - Vancouver fixtures.** Map laycans against PCT / Vancouver Wharves capability and on-dock stock. Parcel band 30-65 kt remains the commercial default screen.
4. **Step 4 - Competing origins.** Place Middle East OSP/freight risk and US Gulf solid availability next to Vancouver FOB offers after lane freight.
5. **Step 5 - Tampa phosphate book.** Read domestic molten quarterly language separately. Only convert to MT for illustration; do not net Tampa DEL against Vancouver FOB as if they were one curve.

By Friday, a coherent pack has: inventory stamp, VFPA/StatCan flow context, hub stamps with units, and a freight netback sketch (Chapter 6) - not a single "NA sulfur price."

4.12 Secondary US nodes

Beyond Gulf recovery and Tampa demand, desks track secondary nodes that matter in some months:

- **Cross-border Canadian molten rail** into US industrial and fertilizer consumers (USGS import share story).
- **Inland US acid plants** burning elemental sulfur away from Florida - local tank-car economics.
- **Pacific Northwest / California consumers** that may take Canadian or other origin solids on regional logistics (volume usually small vs Vancouver-Asia).
- **Export docks outside the core Gulf** when occasional stems appear - verify rather than assume liquidity.
- **Mexico and Caribbean** offtake or transit in episodic trade data - check HS 2503 before building a structural lane.

> **UNCERTAIN**
>
> Secondary node volumes are often poorly separated in open monthly data. Tag estimates and prefer annual USGS / customs aggregates over invented weekly splits.

Companion topics: **Alberta stockpile history**, **Vessel and berth guide**, **Vancouver 10-year**, **US supply USGS**, hub pages on sulfurwire.com.

CHAPTER 5

Trade flows

North American sulfur trade is a surplus-Canada, phosphate-US, Pacific-export story with Atlantic diversion when global origins break. This chapter covers Canadian surplus, the Canada-Asia corridor, the freight hinge, US molten and Gulf solid, Middle East displacement in 2026, Brazil/Africa diversion, China as importer, reading flows without a PRA, and Canada's swing-supplier role.

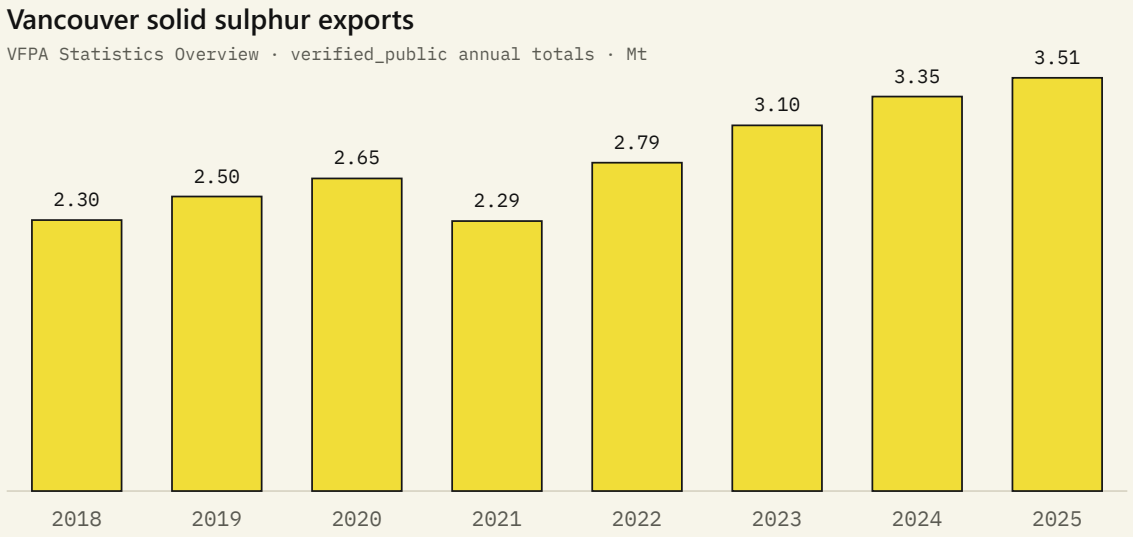

Figure · Vancouver solid sulphur exports · VFPA annual Mt · verified_public

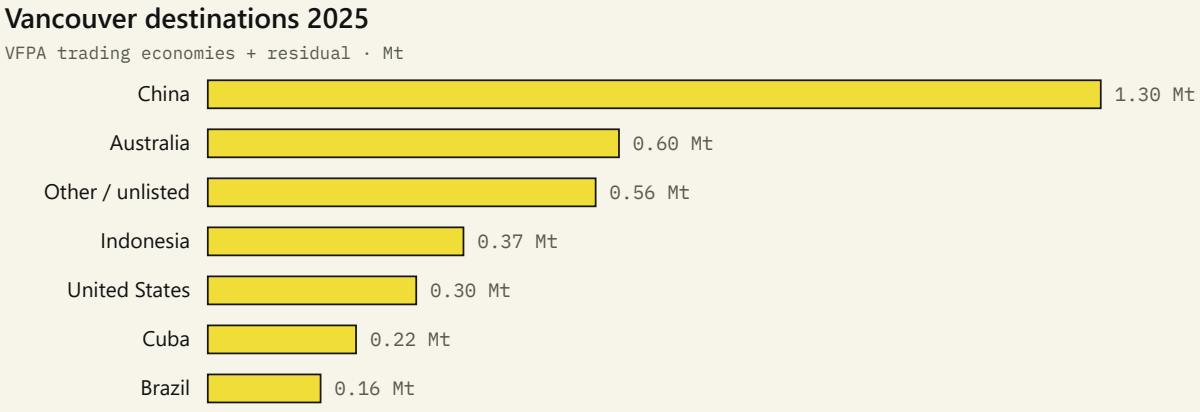

Figure · Vancouver destinations 2025 · VFPA trading economies

5.1 Canadian surplus

Western Canada recovers more elemental sulfur than domestic markets absorb. The surplus clears as:

- Formed dry-bulk exports through Vancouver (VFPA sulphur 3.10 / 3.35 / 3.51 Mt in 2023-2025)
- Molten and solid movements into the United States
- Inventory changes (pour to block vs remelt draw)

Oil-sands upgrading keeps recovery near multi-Mt annual rates even when FOB is soft - soft markets build blocks; firm markets pay remelt and rail. Export-chain costs often cited above $150/t all-in set a practical floor under when surplus becomes vessels.

5.2 Canada-Asia corridor

Stage	What moves
Recovery	Claus sulfur at upgraders and sour-gas plants
Inland	Molten to formers; blocks to remelt; forming to prill/pastille/granule
Rail	CN/CPKC programs to Port Moody and North Vancouver
Loadport	PCT Berth 2 / Vancouver Wharves Berth 4 dry-bulk loadout
Ocean	Supramax/Panamax parcels often 30-65 kt toward Asia and diversion destinations
Demand	China fertilizer/chemical, Indonesia (incl. HPAL-related), Australia, others

Open Pacific transit from Vancouver to major Chinese ports is about 22 days in Canadian trade commentary, without a Hormuz chokepoint. That geographic fact is why Canadian solid gained strategic attention when Middle East logistics broke in 2026.

Topics **Canada-Asia sulfur corridor** and **Pacific route**; VFPA destination notes when published.

5.3 Freight hinge

Freight is the hinge between FOB origins and CFR bids. Desk arithmetic (conceptual):

CFR bid FOB origin + **ocean freight** + **insurance/other** (as contracted).

Netback to producer:

FOB-equivalent CFR - **freight** - **loadport/seller costs**.

For Canadian tonnes, inland costs (forming, remelt, rail, terminal) sit behind FOB. A strong CFR China number can still leave Alberta blocks untouched if inland + FOB cash costs exceed netback. Conversely, soft freight can clear Vancouver even when absolute FOB looks moderate.

> **FREIGHT HYGIENE**
>
> Never subtract a Middle East-Asia freight from a Vancouver FOB and call it a CFR China equivalent without stating the lane. Origin-match freights: Vancouver lanes with Vancouver FOB; Gulf lanes with Gulf FOB; ME lanes with ME FOB.

5.4 US molten (0.9 Mt context)

US domestic molten trade into phosphate and industry is large relative to US seaborne solid exports. Open industry and USGS-framed discussions often place cross-border and domestic molten movements in the

high-hundreds-of-kt to 1 Mt class for Canada-US elemental sulfur import context in recent years - use the latest USGS MCS tables for the citeable annual figure rather than treating 0.9 Mt as a permanent constant.

> **UNCERTAIN**
>
> Exact annual Canada-to-US molten tonnes vary by year and by how customs and USGS tables classify form. Re-pull USGS import tables each MCS edition; do not hard-code 0.9 Mt into multi-year models without a footnote.

Tampa quarterly contracts are the commercial language of the Florida leg of that molten system.

5.5 Gulf solid

US Gulf solid exports are the seaborne cousin of Tampa molten. Volumes are smaller than Canadian Vancouver solids in many years, but the optionality matters: when Middle East supply is disrupted, Gulf docks can divert to Brazil, Africa, and other CFR markets at extreme spot indications (open Argus reporting in 2026). Refineries without forming cannot participate in that door.

5.6 Middle East displacement (2026)

Middle East producers are structural suppliers to Asian phosphate and chemical sulfur demand via OSP and spot. In 2026, open trade press and market notes described severe disruption and risk around Middle East availability and freight (including chokepoint/war-risk narratives). Effects relevant to NA desks:

- CFR Asia bids shifted toward Pacific Canadian offers until rail/forming saturated
- US Gulf solid indications spiked and reached unusual destinations
- Tampa molten quarterly settlements printed at records in open cites (e.g. $705/lt DEL for Q3 in Argus recounting)
- Vancouver FOB in open secondary commentary moved to extreme levels - treat as attributed episodes, not a redistributed weekly curve

> **PRA BOUNDARY**
>
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5.7 Brazil and Africa diversion

January-July 2025 Argus open reporting described Brazilian receipts of Canadian solid nearly triple year on year in that window, with Australia firm and Indonesia softer. In 2026 shock conditions, US Gulf solid reportedly moved into north Africa and east Africa destinations that are not “default” Gulf outlets in quiet years.

Diversion lesson: destination tables are regime-dependent. A quiet-year Canada-Asia map understates Atlantic optionality when ME tonnes disappear.

5.8 China as importer

China is the anchor demand reference for many Pacific solid stems - fertilizer, chemical, and industrial acid chains. Tender language, CFR China indications, and port congestion stories move Vancouver offers. Platform series label `SR-CFR-CHINA` marks that family for internal mapping; licensed assessment detail stays behind PRA licenses.

Canadian advantage in a disrupted ME year is chokepoint insulation plus inventory remelt - not infinite berth capacity.

5.9 Reading flows without a PRA

You can track physical flows with open series:

Open source	Use
VFPA Statistics Overview	Annual Vancouver sulphur loadport tonnes
StatCan HS 2503	Canadian export destinations and values
USGS MCS	US production, imports, Tampa narrative
AER sulphur balance	Alberta inventory path
Company / terminal disclosures	Forming and remelt capability
Open trade-press episodes	Attributed settlements, diversions, freight notes

What you cannot replace without a license: continuous weekly FOB/CFR assessment tapes from Argus, Platts, or CRU. Sulfur Wire publishes anchors, gaps, and fundamentals - not a shadow PRA.

5.10 Swing supplier callout

> **CANADA AS SWING SUPPLIER TO ASIA**
>
> Swing supply has three gears. (1) Current recovery from upgraders and gas plants - inelastic. (2) Remelt of blocks - semi-elastic, capacity-limited. (3) Logistics utilization - rail, forming, berths. The 2025 inventory draw and 2025-2026 forming/remelt investments show gears two and three engaging. Heartland remelt growth and South Cheecham forming are physical enablers of swing volumes without new oil-sands mines. When FOB netbacks fail, gear two stops and blocks grow again.

Companion topics: **Canada swing supplier Asia**, **2026 supply shock**, **Vancouver export decade**, **HS 2503 exports**.

CHAPTER 6

Price formation

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>
> Sulfur Wire is not a price reporting agency. This handbook teaches how markets and assessments work. It does not reproduce licensed Argus, Platts/S&P Global, or CRU weekly assessment series. Where open news reprints or USGS summaries name a settlement or episodic print, the figure is attributed and treated as a public anchor, not a redistributed feed.

Elemental sulfur prices in North America form in physical contracts, PRA assessments, producer OSPs, and freight netbacks - not on an exchange futures curve. This chapter explains what PRAs do, which anchors are open versus licensed, episodic public prints, Vancouver-Gulf basis, conceptual freight netbacks, contract versus spot, why NA futures are absent, Sulfur Wire `SR-*` labels, a worked netback sketch, and how to keep five-year memory without false continuity.

6.1 What price reporting agencies do

Price reporting agencies (Argus, S&P Global Platts, CRU, and peers) collect transactional and bid/offer information under published methodologies and issue assessments - often weekly - for defined markets (for example FOB Vancouver granular, FOB Middle East, Tampa molten). Subscribers use those assessments in contracts, mark-to-market, and procurement scorecards.

PRA products are licensed intellectual property. Redistributing weekly assessment series in a public handbook or website violates that boundary. Teaching **how** assessments work, and citing **open** episodic reprints or USGS summaries, does not.

6.2 Open anchors vs licensed series

Class	Examples
Open government	USGS MCS Tampa path and US production/import tables; VFPA tonnes; AER inventory; StatCan HS 2503
Open episodic	Attributed Argus/Platts/CRU figures that appear in freely readable news or subscriber notes summarizing a launch - cite once with date
Licensed continuous	Weekly assessment tapes and full historical CSV products from PRAs - not republished by Sulfur Wire
Platform labels	`SR-*` codes that map families for API/charts without claiming to be PRA assessments

Sulfur Wire observation classes reinforce the split: open reprints of licensed prints are tagged `industry_estimate`, not `verified_public`. Dashboard charts prefer public anchors with gaps over silently densified fake continuity.

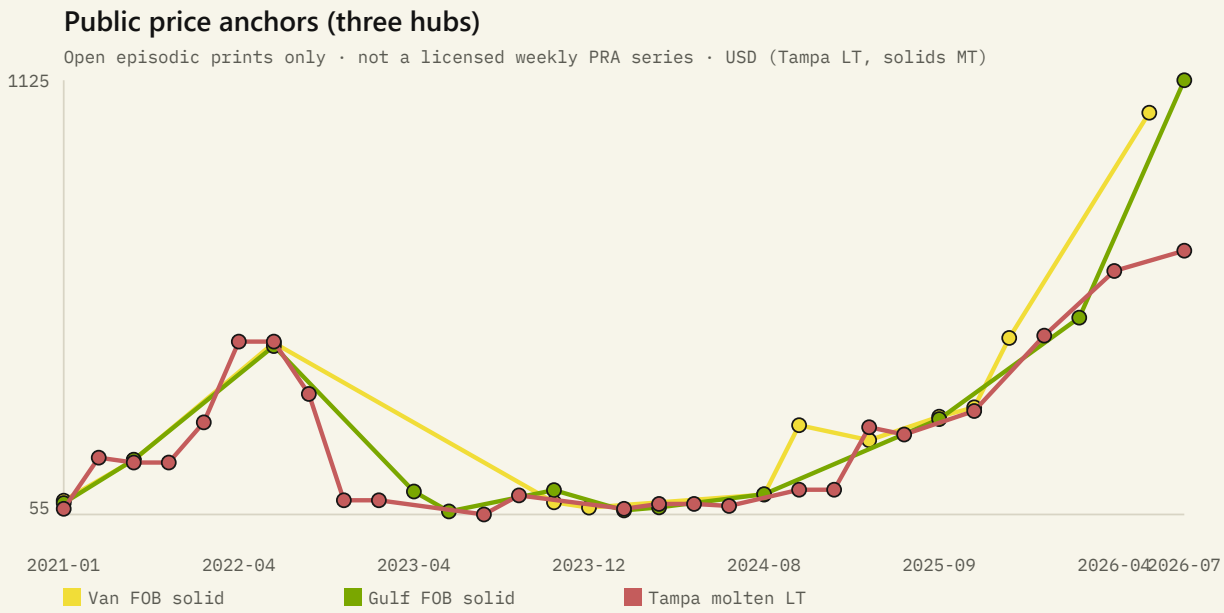

Figure · Public price anchors for Vancouver, Gulf, Tampa · episodic only · not a licensed weekly series

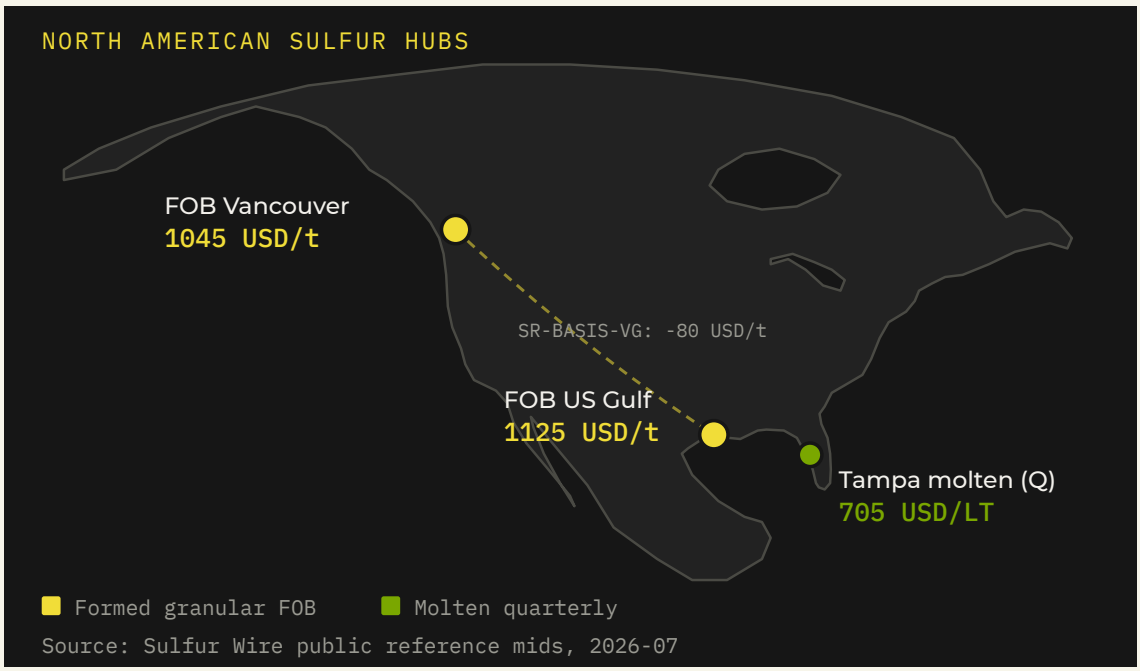

Figure · Hub map context · Sulfur Wire

6.3 Episodic public anchors

Useful open anchors for teaching and context (always re-verify against the cited edition):

1. **Tampa paths (USGS).** MCS narratives track Tampa molten contract prices across years in USD/LT - e.g. soft prints near $69/lt in quiet windows, $116/lt into early 2025 narrative starts, and much higher levels as 2025-2026 progressed.

2. **Tampa record settles (open Argus cites).** Trade press recounted Q3 2026 Tampa settlements at $705/lt delivered - an episodic shock print, not a weekly feed.
3. **Platts Gulf launch / update notes.** S&P Global subscriber notes (2025-2026) on Americas sulfur assessments, including FOB US Gulf dry bulk context, are open methodology signals. They justify tracking a Gulf solid family; they are not a license to paste the assessment history.
4. **Vancouver / ME extremes in secondary press.** Open SMM and related commentary in 2026 cited FOB Vancouver and Middle East figures at historically extreme levels. Attribute and date-stamp; do not stitch them into a fake weekly curve.

USGS MCS sulfur chapters; Platts subscriber note pages; Argus open news; Sulfur Wire Sources and Methodology pages.

6.4 Vancouver-Gulf basis

Basis between FOB Vancouver granular and FOB US Gulf granular measures relative tightness of Pacific versus Atlantic North American solid export doors after you hold form constant. Platform code `SR-BASIS-VG` = Vancouver mid - Gulf mid on that solid FOB pair.

Why the spread moves:

- Pacific demand into China and Oceania vs Atlantic demand into Brazil and Africa
- Vessel availability by ocean
- Origin-specific shocks (rail/wildfire in Canada; refinery outages on the Gulf; ME displacement affecting both)

Form basis matters as much as geography. Tampa molten USD/LT DEL is not subtractable from Vancouver USD/t FOB granular without unit conversion **and** inland US logistics - and even then the products differ.

6.5 Freight netbacks (conceptual)

A netback answers: what FOB (or what inland netback) does a CFR bid imply?

Illustrative identity (not a quote):

```
Implied FOB  CFR destination - ocean freight - other voyage costs allocated to seller/buyer per contract
```

For a Canadian producer marketing through Vancouver:

```
Inland netback  FOB Vancouver - terminal/rail/forming/remelt cash costs
```

Costs often cited above $150/t all-in for the Canadian export chain mean remelt stays off when FOB is soft.

Origin-match rules:

- Vancouver routes use Vancouver FOB
- Gulf routes use Gulf FOB
- Middle East routes use ME FOB / OSP

Transit days on Sulfur Wire netback pages are lane estimates, not fixture prints.

6.6 Contract vs spot

Mode	Where it shows up	Desk use
Quarterly contract	Tampa molten; some Vancouver programs	Budget and offtake planning; USGS/Argus episodic settles
OSP / monthly	Middle East producers	Anchor for CFR negotiations

Spot tender	Asia, Brazil, Africa buyers	Clears marginal tonnes; noisy
Term lifting	Producer-marketer programs	Logistics utilization; take-or-pay mid-stream

Spot prints can disconnect from quarterly contracts in shocks - 2026 is the teaching case. Keep both books.

6.7 Why no North American futures

Elemental sulfur in North America still trades almost entirely in physical bilateral contracts. There is no widely used exchange-cleared sulfur futures curve for FOB Vancouver, FOB US Gulf granular, or Tampa molten that fertilizer and refining desks treat as a hedge standard.

Reasons of market structure:

1. Recovered supply is inelastic to price in the short cycle.
2. Form and logistics fragment the product (molten DEL vs solid FOB).
3. A single futures contract would leave large residual basis risk.
4. Liquidity would compete with entrenched PRA contract references.

Open government series still let participants see stocks and flows without a futures strip. Basis and freight remain the practical hedge language.

6.8 Platform SR labels

Code	Meaning on Sulfur Wire
`SR-VAN-FOB-G`	FOB Vancouver granular family
`SR-GULF-FOB-G`	FOB US Gulf granular export spot family
`SR-TAMPA-Q`	Tampa molten quarterly family (USD/LT)
`SR-TAMPA-MOLTEN`	Tampa molten related label
`SR-ME-FOB`	FOB Middle East / OSP family
`SR-CFR-CHINA`	CFR China family
`SR-BASIS-VG`	Vancouver mid minus Gulf mid (solid FOB)
`SR-US-DOM-AVG`	USGS-style US domestic average context - not Gulf export spot
`SR-VAN-FOB` / `SR-GULF-FOB`	Related hub labels on facility/hub pages

These codes organize platform data. They are not Argus or Platts symbols and do not grant redistribution rights to licensed assessments.

6.9 Worked netback sketch

Scenario (illustrative arithmetic only - not a market quote):

Suppose a buyer talks CFR China at $X/t for formed sulfur, and a shipbroker indicates Vancouver-China freight at $F/t for a 50 kt stem. Ignore insurance and demurrage for the sketch.

1. Implied FOB Vancouver $X - $F.
2. Compare that implied FOB to your inland cash cost stack (forming + rail + terminal + remelt, if any). If inland costs are $150/t and implied FOB is $140/t, remelt tonnes stay on the block.

3. Build the competing sketch with ME FOB/OSP + ME-Asia freight + war-risk adder.
4. Build a third sketch with Gulf FOB + Gulf-China or Gulf-Brazil freight if the buyer can take Atlantic origin.
5. Only after unit alignment, glance at Tampa USD/LT DEL as a **separate** domestic molten temperature check - convert to $/MT if you must display it beside solids, but do not net it as freight-equivalent FOB.

> **SKETCH RULES**
>
> Label every input as assumption or attributed print. Change one input at a time. Never paste a licensed weekly assessment into a public netback table.

6.10 Five-year memory without false continuity

The 2021-2026 cycle taught synchronized spikes and collapses (2022), quiet basis with rising Vancouver tonnes (2023-24), Pacific strength and Alberta draws (2025), and ME-displacement extremes (2026). Memory is useful; false continuity is not.

Practice:

1. Prefer annual VFPA and USGS points over interpolated months when the open record is silent.
2. On charts, show gaps where anchors are missing rather than a smooth synthetic line.
3. Date-stamp episodic price cites (month/quarter/year) and keep them out of “weekly average” language unless the source is actually weekly and licensed for your use.
4. Remember regime breaks: a 2024 basis band may be useless in June 2026.

> **UNCERTAIN**
>
> Continuous public weekly FOB series for Vancouver and Gulf solids do not exist as government products. Any smooth public chart that looks “weekly” for years is either licensed (not ours to republish) or densified - read the methodology tag.

Topics: **Why no NA futures, Vancouver vs Gulf basis, Tampa molten contract history, Sulfur cycle 2021-2026, 2026 shock in five-year context.**

CHAPTER 7

Supply and demand

Sulfur balances are easy to fake and hard to know. Global “Mt surplus/deficit” headlines often mix industry estimates with different product scopes. This chapter keeps the desk dashboard honest: oil and gas throughput, remelt and inventory, Middle East origins, phosphate demand, metals leaching/HPAL, China policy, other industrial use, a watch table, and an explicit warning against fake precision.

7.1 Oil and gas throughput (supply)

Recovered sulfur supply is a function of:

1. Sour crude and gas runs at refineries and gas plants
2. Oil-sands upgrader utilization and SCO production
3. Acid-gas composition and Claus/tail-gas operability
4. Turnarounds and unplanned outages

Price does not turn Claus units on. Hydrocarbon margins and physical crude/gas availability do. For Canadian desks, Horizon, Syncrude, Suncor Base Plant, Scotford, and numerous sour-gas plants are the molecule factories. For US desks, Gulf Coast refinery crude quality and runs dominate.

Watch list: refinery utilization, upgrader status, major turnaround calendars, and wildfire/rail events that change **effective** marketed supply even when pits keep filling.

7.2 Remelt and inventory (semi-elastic supply)

Inventory and remelt are the only short-cycle supply valves that respond to sulfur netbacks:

- Alberta provincial stock (11.66 Mt Jul 2025 attributed print) is the Canadian scoreboard
- Heartland and peer remelt rates decide how fast blocks become stem-ready
- Forming nameplate (South Cheecham 4,400 t/d; Heartland 4,500 t/d) caps conversion
- Soft FOB -> pour to block; firm FOB -> remelt draw (capacity-limited)

CRU-style commentary on 1.5 Mt Canadian remelt-and-sale across 2025-2030 is a scenario class, not a monthly forecast. Tag it.

7.3 Middle East origins (competing supply)

Middle East recovered sulfur (and related solid export programs) sets the global competing FOB/OSP for Asian buyers. When ME tonnes and freight function normally, Vancouver clears on Pacific relationships and modest netbacks. When ME availability breaks - as open 2026 narratives described - North American solids and Tampa molten can print extreme levels without any change in Alberta Claus nameplate.

Chokepoints, war-risk insurance, and OSP policy are demand-side **and** competing-supply shocks for NA marketers.

7.4 Phosphate (primary demand)

Phosphoric acid and phosphate fertilizer chains are the core elemental sulfur demand story in the Atlantic and much of the Pacific trade. Florida phosphate anchors Tampa molten contracts. Global phosphate operating rates, rock supply, and fertilizer margins decide how hard buyers chase CFR tonnes.

Desk implication: a sulfur spike that destroys phosphate margins eventually ration demand - but lags can be long enough to empty inland inventories first.

7.5 Metals leaching and HPAL

High-pressure acid leaching (HPAL) and related metals circuits consume sulfur (via acid) in nickel and other projects - Indonesia has been the headline geography in 2020s trade commentary. This demand is project-lumpy: ramps, outages, and ore grades matter more than a smooth global GDP beta.

> **UNCERTAIN**
>
> Project-level sulfur offtake is rarely disclosed as a clean public monthly series. Use company reports and trade-press episode cites; avoid inventing a precise “HPAL Mt” line without sources.

7.6 China policy and industrial demand

China’s fertilizer, chemical, and industrial acid complex dominates Pacific solid import narratives. Policy levers - environmental inspections, fertilizer export rules, industrial operating rates - move tender appetite. Canadian exporters feel China as CFR bids and stem cadence, not as a single customs field in VFPA tables every month.

Pair VFPA annuals with StatCan destination detail and open tender news. Do not assume last year’s China share holds in a diversion year (Brazil 2025 lesson).

7.7 Other industrial demand

Beyond phosphate and HPAL-related acid:

- Caprolactam and chemical chains
- Ore leaching outside nickel
- Pulp and other regional industrial burners
- Inventory building by traders and consumers when curves invert or spot spikes

These slices are real but easy to double-count in global balances. Prefer named-plant anecdotes with attribution over a false all-sector total.

7.8 Desk dashboard watch table

Watch	Cadence	Open source / note
Alberta inventory	Monthly when published	AER; trade-press cites; Sulfur Wire Inventory
Vancouver loadings	Annual + reported months	VFPA; Exports page

StatCan HS 2503	Monthly/annual	Destination mix
USGS sulfur MCS	Annual	US production, imports, Tampa path
Remelt/forming news	Event	Company / Argus-CRU open cites
Phosphate margins	Weekly/monthly	Fertilizer press; not sulfur PRA
ME OSP / risk	Monthly/event	Producer notices; open news
Rail/wildfire	Event	Carrier and provincial alerts
Berth/stem static	As needed	Sultran/PCT manuals; not live AIS

7.9 Avoid fake precision

ANTI-PRECISION CHECKLIST

- ☐ Do not publish a global balance to 0.01 Mt from incompatible sources
- ☐ Do not fill missing inventory months with the last print
- ☐ Do not treat forming t/d × 365 as annual Mt
- ☐ Do not average Tampa USD/LT with Vancouver USD/t
- ☐ Do not convert episodic news prints into a weekly index
- ☐ Label industry estimates
- ☐ Prefer gaps on charts to synthetic smoothness

Print and mark. Leave blank if UNCERTAIN.

Global sulfur is roughly a tens-of-Mt market depending on scope (elemental vs all sulfur forms). North American seaborne solids are a few Mt at Vancouver plus a smaller Gulf door. Keep magnitudes in the right order: Alberta stocks 10+ Mt can overshadow a single month of loadings if remelt wakes up - or sit inert if netbacks fail.

Companion topics: **Recovered sulfur byproduct economics**, **Alberta inventory draw**, **2026 supply shock**, **Remelt and block storage**.

CHAPTER 8

Desk practice

Start with volumes, not prices. Open fundamentals tell you whether trains and vessels can clear; licensed assessments (under your own subscription) mark contracts. This chapter is the operating manual for using Sulfur Wire beside a PRA: volumes first, stems and berths as static capability, observation classes, UNCERTAIN tags, daily-to-quarterly ritual, spreadsheet hygiene, tips/outlook/API, common errors, and a one-week analyst onboarding plan.

8.1 Start with volumes

Order of operations for a North American solid book:

1. Open **Exports** and read the annual Vancouver table first (VFPA Statistics Overview). That is the loadport system of record for solid sulfur through Port of Vancouver.
2. Read monthly exports only where months are reported or bridged. Equal-month calendar fills may exist in full files for reconciliation; the default UI and `/api/v1/exports?monthly=1` withhold them unless you pass `all=1`.
3. Check **Inventory** next. The series ends at the last attributed provincial observation (July 2025 near 11.66 Mt in the current public pack). Later months are not held flat.
4. Then hubs, facilities, berths - form and unit traps - then price anchors with gaps.

> **VOLUME BEFORE MARK**
>
> If you cannot say whether Vancouver is on a 3 Mt or 3.5 Mt annual path, or whether Alberta stocks are drawing, you are not ready to interpret an FOB print.

8.2 Stems and berths are static

Sulfur Wire berth pages summarize public operator disclosures (PCT Berth 2, Vancouver Wharves Berth 4 depths, LOA, loader rates). They are **not** live AIS, not a stem board, and not a substitute for the terminal manual or agent.

Use them to:

- Screen whether a candidate vessel's LOA/beam/draft is plausible
- Remember shift productivity vs peak t/h nameplate
- Explain why rail reclaim gates the berth

Do not use them to assert that a named vessel is loading today.

8.3 Observation classes

Class	Meaning
`verified_public`	Citable open primary source (agency PDF, company disclosure as published)

`industry_estimate`	Trade press or secondary attribution - including open reprints that name PRA prints
`platform_estimate`	Sulfur Wire densified or constructed value for completeness - often withheld from default charts
`derived`	Calculated from other series (e.g. basis as difference)

Trust labels are not price grades. A `verified_public` tonnage can still be revised by the agency later.

8.4 UNCERTAIN tags

Use explicit uncertainty when the open record is incomplete:

- Facility remelt utilization
- Exact molten vs solid splits in customs data
- Continuous Gulf-Vancouver weekly spreads without a license
- HPAL project offtake
- Anything after the last inventory observation

> **UNCERTAIN**
>
> If a number would change a vessel decision and you cannot name the PDF or table, it is not desk-ready. Tag UNCERTAIN and escalate to primary sources or a licensed feed.

8.5 Sulfur Wire beside a PRA

Task	Sulfur Wire	PRA subscription
Annual loadings	VFPA table / Exports	Context only
Inventory path	Inventory + AER	May cite; verify
Weekly FOB mark	Anchors/gaps only	Primary mark-to-market
Netback sketch	Origin-matched lanes	Assessments as inputs under license
Berth screen	Static specs	Not their job
Methodology	Open trust path	Subscriber methodology guides

Sulfur Wire is not a cheaper Argus. It is the open fundamentals layer.

8.6 Ritual: daily / weekly / monthly / quarterly

8.6.1 Daily

- Scan outage, wildfire, rail, and berth news
- Check Outlook for any new public brief dated on or before today
- Note any tip inbox items that affect stems or quality

8.6.2 Weekly

- Update freight assumptions on rail/ocean lanes you care about

- Re-read basis with units stamped (Vancouver vs Gulf solids; Tampa separate)
- Walk facilities only when a capacity announcement hits

8.6.3 Monthly

- Pull StatCan HS 2503 deltas
- Refresh AER inventory when available
- Reconcile Exports monthly reported/bridge months
- Audit spreadsheet: any cell missing unit/Incoterm?

8.6.4 Quarterly

- Tampa quarterly contract window (USGS/trade-press episodic)
- VFPA-related annual PDF when published
- Remelt/forming capacity scorecard vs prior quarter
- License/methodology review if sharing data externally

8.7 Spreadsheet hygiene

WORKBOOK HYGIENE CHECKLIST

- ☐ One fact per cell; hub/form/Incoterm/unit/currency/date stamped in a header row
- ☐ LT conversion (1.0160469088) only inside a documented conversion block
- ☐ Separate tabs: Volumes / Prices_anchors / Freights / Netbacks / Decisions
- ☐ No licensed weekly PRA CSV pasted into a workbook that will be emailed publicly
- ☐ Column or color for observation class
- ☐ “Killed ideas” list kept for numbers you chose not to use

Print and mark. Leave blank if UNCERTAIN.

8.8 Tips, Outlook, API

- **tips@sulfurwire.com** - operational and market tips; treat as leads to verify
- **Outlook** - weekly public briefs; “latest” means newest brief on or before today
- **API** (`/api/v1/...`) - machine-readable series; respect `monthly=1` vs `all=1` export behavior
- **Methodology / License / Data quality** - diligence path for reuse

8.9 Common desk errors

Error	Correction
Tampa $/LT vs Vancouver $/t	Convert mass; still separate DEL molten from FOB solid

Using densified months as facts	Prefer anchors; show gaps
Berth nameplate as stem proof	Static capability only
Flat inventory after last print	End the series; pull AER
ME freight on Vancouver FOB	Origin-match freights
Forming t/d x 365 = Mt	Utilization unknown
One “NA price”	Keep three books: Tampa, Gulf solid, Vancouver solid
Pasting PRA weeklies publicly	License boundary - do not

8.10 Onboarding a new analyst (one week)

WEEK-ONE ONBOARDING CHECKLIST

- ☐ Day 1 — Chapters 1–3 read; LT/MT factor written from memory; Units page exercised
- ☐ Day 2 — Chapter 4 read; Alberta → former → rail → PCT/Wharves sketched; berth depth/LOA quoted
- ☐ Day 3 — VFPA 2023–2025 sulphur tonnes in a sheet; July 2025 inventory with source note; no prices yet
- ☐ Day 4 — Chapters 5–6 read; one origin-matched netback sketch with labeled assumptions only
- ☐ Day 5 — Chapters 7 and 9 read; five watch items listed for the coming month
- ☐ End of week — Chapter 8 ritual reviewed; methodology tags explained to a peer

Print and mark. Leave blank if UNCERTAIN.

Day 6 - Platform fluency. Walk Inventory, Exports, Hubs, Facilities, Berths, Charts, Series, Methodology. Send one verified tip or one corrected UNCERTAIN note to the team.

Day 7 - Supervised mark. With a licensed PRA screen (if the desk has one), reconcile how Sulfur Wire anchors relate without copying weekly values into public tools. Present a 10-minute pack: volumes, one basis stamp, one risk.

Topic **Desk guide: using Sulfur Wire**; methodology and API docs on sulfurwire.com.

CHAPTER 9

Risk

Physical sulfur trading risk is mostly logistics, quality, policy, and counterparty - not a futures margin call. This chapter covers demurrage, quality, storage/remelt, sanctions/policy, chokepoints, counterparty, FX/unit risk, HSE, and a 10-point checklist before fixing.

9.1 Demurrage

Demurrage is the daily cost when a vessel waits beyond allowed laytime. At Vancouver sulfur berths, wait risk comes from:

- Incomplete rail reclaim / thin on-dock stock
- Weather, dust control, and shift limits
- Berth congestion and stem reallocation
- Survey and hold readiness delays

Mitigations: realistic laycans, agent discipline, stockpile confirmation before firming the ship, and charter-party clauses that match terminal practice. Peak loader t/h is not a demurrage model.

> **DEMURRAGE DESK NOTE**
>
> Price a delay day explicitly before you stretch a laycan to catch a higher FOB. Extreme FOB does not erase demurrage arithmetic.

9.2 Quality risk

Rejection, claims, and reprocessing costs arise from:

- Size distribution outside burner or contract bands
- Moisture, acidity, ash
- H2S / degassing failures on molten or poorly degassed solids
- Contamination in holds or railcars
- Bright/dark disputes when contracts are vague

Controls: written specs, independent survey, sealed samples, and clear rejection/disposition clauses. “Canadian prill” without a size band is not a spec.

9.3 Storage and remelt risk

Blocks and tanks carry physical and commercial risk:

1. **Working capital** tied in inventory when netbacks fail
2. **Remelt capacity** insufficient when everyone remelts at once
3. **Quality degradation** or handling losses on reclaim
4. **Reclamation / environmental** obligations on long-lived blocks
5. **Basis risk** between inventory cost and eventual FOB

Remelt is optional supply only inside ticket-rate and forming constraints. Treat announced t/d as capability, not guaranteed monthly Mt.

9.4 Sanctions and policy

Sanctions, export controls, and end-use restrictions can hit counterparties, vessels, insurers, and banks even when the molecule is Canadian or US origin. Fertilizer and industrial buyers in some jurisdictions add compliance questionnaires.

Policy risk also includes:

- Port and rail labor actions
- Environmental permit changes at formers or terminals
- China fertilizer/industrial policy affecting tender appetite
- Sudden OSP or producer allocation policy in competing origins

This handbook is not legal advice. Escalate to counsel and compliance before fixing sensitive trades.

9.5 Chokepoints

Chokepoint	Why it matters	NA sulfur angle
Hormuz / ME freight risk	ME solid availability and war-risk	Diverts demand to Vancouver/Gulf; 2026 teaching case
Vancouver rail	Stem-ready tonnes	Wildfire, congestion, car cycles
Vancouver berth	Loadout capacity	PCT / Wharves windows; weather
Forming/remelt	Solid conversion	Heartland / Cheecham utilization
Gulf docks	US solid export door	Not all refiners have forming
Suez / Cape routing	Atlantic/Asia voyage time	Affects Gulf and ME more than Vancouver-China

Canadian Pacific route advantage is chokepoint insulation on the ocean leg - inland chokepoints remain.

9.6 Counterparty risk

Know who performs:

- Producer vs marketer vs trader as seller
- Payment security (L/C, prepay, open account)
- Vessel owner/operator and club insurance
- Terminal and stevedore responsibility boundaries
- Force majeure language that actually covers rail and remelt events

Title transfer under the Incoterm must match insurance start. Audit the chain before the ship tenders NOR.

9.7 FX and unit risk

Most seaborne sulfur marks are USD. Inland Canadian costs may be CAD. Tampa is USD/LT; Vancouver is USD/MT. Risks:

- CAD/USD moves on inland margins
- Silent LT/MT errors (1.6% mass, plus any price mis-read)

- Mixing CIF/CFR/FOB in a USD “stack”

Convert explicitly; hedge FX only with instruments your treasury approves - sulfur has no standard futures hedge.

9.8 HSE note

Molten sulfur and H2S kill people. Dust explosions and hold atmospheres injure stevedores. Commercial urgency never overrides:

- Degassing and gas testing protocols
- PPE and exclusion zones at load/discharge
- Hot-work rules near molten systems
- IMSBC / cargo documentation for solid bulk

> **HSE BOUNDARY**
>
> If operations pause a stem for gas or temperature, the desk documents demurrage and customer notice - it does not pressure a safety bypass. Full stop.

9.9 Ten-point checklist before fixing

BEFORE FIXING A STEM

- ☐ Form, size band, and quality spec written
- ☐ Incoterm + named place + unit (MT or LT) + currency
- ☐ Parcel size vs berth/vessel limits (30–65 kt as starting screen)
- ☐ Laycan aligned with stockpile and rail reclaim confirmation
- ☐ Freight origin-matched; demurrage day-rate known
- ☐ Counterparty and payment security cleared
- ☐ Sanctions/KYC completed for buyer, seller, vessel, banks
- ☐ Survey and sampling clauses agreed
- ☐ Force majeure and terminal manual conflicts reviewed
- ☐ Netback still works after inland costs and a delay-day stress

Print and mark. Leave blank if UNCERTAIN.

If any item is UNCERTAIN at fix time, escalate or price the uncertainty explicitly.

Companion: vessel/berth topic; License and Methodology for data reuse risk; counsel for sanctions.

CHAPTER 10

Glossary and further reading

Dense A-Z desk terms for North American recovered sulfur, followed by open further-reading links. Edition note at the end.

10.1 Glossary A-Z

Acid gas. H2S-rich gas stream from amine treating; Claus plant feed.

Amine treating. Process that concentrates H2S from sour gas or refinery streams into acid gas.

Assessment. PRA-published price for a defined market and methodology; usually licensed.

Basis. Spread between hubs, forms, or Incoterms; e.g. Vancouver FOB minus Gulf FOB solids.

Block sulfur. Elemental sulfur poured into outdoor blocks when marketing/logistics cannot clear molten.

Bright / dark. Trade language for color/impurity appearance grades of elemental sulfur.

CFR. Cost and Freight Incoterm to a named discharge port.

CIF. Cost, Insurance, and Freight Incoterm.

Claus process. Process converting H2S to elemental sulfur via partial oxidation and catalytic reaction.

CPKC. Canadian Pacific Kansas City rail; with CN, moves formed sulfur to Vancouver.

CN. Canadian National Railway.

Crushed sulfur. Mechanically broken block material, often remelt feed.

DEGASSING. Removal of H2S and related gases from molten sulfur before sale or forming.

DEL / Delivered. Delivered basis; Tampa molten quarterly contracts are typically delivered into Florida phosphate logistics (USD/LT).

Demurrage. Payment for vessel time beyond allowed laytime.

Dry bulk. Solid cargo loaded loose into ship holds (formed sulfur).

FOB. Free On Board at named loadport; core Vancouver and Gulf solid export basis.

Forming. Freezing molten sulfur into prill, pastille, granule, or related solids.

Frasch. Historical mined sulfur process using superheated water; not today's NA supply core.

Granule. Formed sulfur from granulation technology; premium handling grade in some programs.

HS 2503. Harmonized System heading for elemental sulfur trade statistics.

HPAL. High-pressure acid leaching; metals process that consumes sulfur via acid demand.

Incoterms. ICC trade terms allocating cost and risk (FOB, CFR, CIF, etc.).

Industry estimate. Observation class: trade-press or secondary attribution.

Laycan. Laydays/cancelling window for a vessel stem.

Long ton (LT). 1 LT = 1.0160469088 MT; Tampa molten unit.

Metric tonne (MT). 1,000 kg; Vancouver and Gulf solid unit.

Molten sulfur. Liquid elemental sulfur in heated logistics.

Netback. Price at origin implied by a destination price minus freight and costs.

NOR. Notice of Readiness (vessel).

Observation class. Sulfur Wire trust tag: verified_public, industry_estimate, platform_estimate, derived.
Oil sands upgrader. Facility converting bitumen to SCO; recovers sulfur via Claus trains.
OSP. Official selling price (often Middle East producer monthly sulfur price).
Pastille. Belt-formed sulfur pellet.
PCT. Pacific Coast Terminals, Port Moody; primary sulfur loadport berth system with Berth 2.
Phosphate. Fertilizer/acid demand chain; Tampa molten anchor.
Platform estimate. Sulfur Wire densified/constructed value; not a PRA print.
PRA. Price reporting agency (Argus, Platts/S&P Global, CRU, etc.).
Prill. Small spherical formed sulfur from droplet solidification.
Recovered sulfur. Elemental sulfur from gas treating/Claus, not Frasch mining.
Remelt. Melting block or solid sulfur back to molten for forming or sale.
SCO. Synthetic crude oil from upgraders.
Slate. Older belt-cooled sulfur fragments.
Solid export. Formed dry-bulk seaborne sulfur (Vancouver, some Gulf).
Spot tender. Buyer invitation for prompt/nearby sulfur parcels.
SR labels. Sulfur Wire series family codes (e.g. SR-VAN-FOB-G); not PRA symbols.
Stem. Nominated cargo lifting program for a vessel/loadport.
Sultran. Logistics coordinator for Canadian sulfur terminals at PCT and Vancouver Wharves.
Take-or-pay. Midstream contract featuring minimum payment whether volumes move or not.
Tail-gas treating. Units that raise Claus-plant sulfur recovery to meet emissions permits.
Tampa. Florida molten sulfur demand hub language for phosphate contracts (USD/LT).
US Gulf. Recovery and (where equipped) solid export region in Louisiana/Texas.
Vancouver Wharves. North Vancouver terminal; Berth 4 dual-quadrant sulfur loading.
Verified public. Observation class tied to citable open primary sources.
VFPA. Vancouver Fraser Port Authority; publishes cargo statistics including sulphur.
Wet prill. Prilling process using water quench before drying.
Wildfire risk. Northern Alberta/BC seasonal threat to rail and site access for sulfur logistics.

10.2 Further reading

10.2.1 Agency / port

- AER ST3 statistical reports - https://www.aer.ca/data-and-performance-reports/statistical-reports/st3
- VFPA cargo statistics - https://www.portvancouver.com/media/cargo-statistics
- USGS Sulfur Statistics and Information - https://www.usgs.gov/centers/national-minerals-information-center/sulfur-statistics-and-information
- USGS Mineral Commodity Summaries (sulfur chapter PDFs) - https://www.usgs.gov/centers/national-minerals-information-center/mineral-commodity-summaries
- Statistics Canada merchandise trade (HS tools) - https://www.statcan.gc.ca

10.2.2 Terminal / midstream

- Sultran logistics and terminal operations - https://www.sultran.com/our-services/logistics-terminal-operations/

- Pacific Coast Terminals operations - https://pct.ca/our-services/terminal-operations/

10.2.3 Open trade press

- BC Insight (sulfur/fertilizer open pages as available) - https://www.bcinsight.com
- Argus media open news (episodic; not a weekly assessment license) - https://www.argusmedia.com
- S&P Global Commodity Insights open subscriber notes / news - https://www.spglobal.com/commodity-insights

10.2.4 PRA product pages

- Argus sulfur product information (subscription) - https://www.argusmedia.com
- Platts/S&P Global sulfur assessments (subscription; Americas update notes) - https://www.spglobal.com/commodity-insights
- CRU sulfur coverage (subscription) - https://www.crugroup.com

10.2.5 Sulfur Wire

- Handbook landing - https://sulfurwire.com/handbook
- Methodology - https://sulfurwire.com/methodology
- License - https://sulfurwire.com/license
- Series catalog - https://sulfurwire.com/series
- Desk guide topic - https://sulfurwire.com/topics/desk-guide
- Units helper - https://sulfurwire.com/units
- API - https://sulfurwire.com/api
- Tips - tips@sulfurwire.com

10.2.6 Transport regulation

- IMSBC Code context (IMO solid bulk cargoes) - https://www.imo.org
- Transport Canada dangerous goods / cargo guidance portals - https://tc.canada.ca
- US Coast Guard / PHMSA references for molten sulfur rail and vessel practice - consult current agency pages before operations

10.3 Edition note

Sulfur Wire Trading Handbook, Edition **2026.07**.

Figures such as Alberta inventory 11.66 Mt (Jul 2025), VFPA sulphur 3.10 / 3.35 / 3.51 Mt (2023-2025), and forming nameplates (South Cheecham 4,400 t/d; Heartland 4,500 t/d) are attributed open observations as of the edition window. They age. Re-pull AER, VFPA, USGS, and terminal manuals before committing capital or vessels.

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Colophon

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