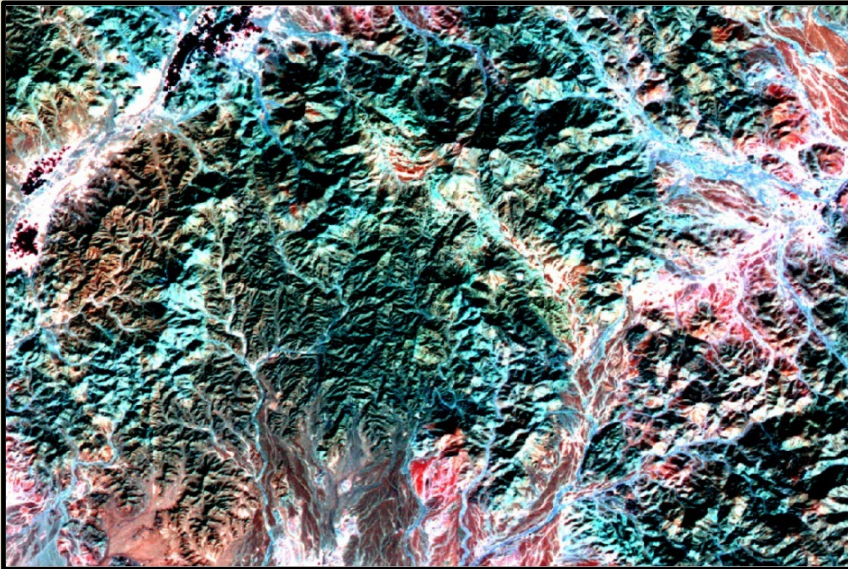


At IndiGEO, we help companies unlock the value in their historical exploration records. While AI is a great tool for digitizing data, it can often struggle with the fine details found in complex geological maps and reports. We solve this by using a Human-in-the-Loop (HITL) workflow, which combines automated tools with a manual review process. This ensures your legacy data is converted accurately and cost-effectively, providing your team with reliable information for their next exploration program.



ABOUT US

IndiGEO Consultants, based in Bangalore, India, brings a dedicated team of twenty experienced geoscientists to deliver Human-in-the-Loop (HITL) AI data capture for legacy exploration data. Our process combines AI-driven extraction with expert geoscientist review at every stage, ensuring each dataset is checked, corrected, and validated by a human specialist before delivery. This HITL approach transforms legacy maps and reports into high-precision, GIS-ready datasets, giving clients a level of accuracy, speed, and cost-effectiveness that fully automated or purely manual models can't match.

OUR SERVICES

✓ Verified Historical Data Digitization

Unlock the Potential of Historical Archives with HITL AI Workflows

- **Geology:** Specialist-led recovery of regional to prospect-scale maps, including lithological units, contacts, structural features, and mineral occurrences.
- **Geochemistry:** Extraction of surface sampling (stream, soil, rock) and 3D digitization of underground mapping and sampling.
- **Geophysics:** Geophysicist-verified digitization of contours, profiles, and grids, including IP pseudosections and high-accuracy wireline log conversion (LAS generation).
- **Drilling:** Systematic recovery of drill logs, assays, lithological descriptions, structural data, and geotechnical records from unstructured sources.

We specialize in transforming legacy data of all types - from handwritten field notes to OCR-processed tables - using **Human-in-the-Loop (HITL) validation**. This ensures that even the most complex historical records are converted into high-fidelity datasets ready for modern exploration.

✓ Legacy Data Value Enhancement & ML-Readiness

- **Database Compilation & Management:** Transform raw digitized data into structured, relational databases formatted for statutory compliance and optimized for ingestion into Machine Learning (ML) pipelines.
- **Geological Classification:** By applying text normalization with professional oversight, we standardize lithological and rock-type classifications. This enables powerful database queries, automated pattern recognition, and accelerated target generation.

✓ Precision Georeferencing & Spatial Validation

- Accurate georeferencing for prospect-to-regional scale maps of any vintage. In the absence of annotated coordinates, our team utilizes geographical feature matching against modern satellite imagery to establish control points. Spatial accuracy is quantified, providing full transparency on positional confidence and data reliability.

✓ Advanced Geophysical Processing and Interpretation

- Ground and airborne geophysical datasets are re-processed and analysed using modern computational techniques. We incorporate both 2D and 3D inversion modelling to refine target definitions and enhance subsurface visualization.

✓ Digital Cartography and Statutory Reporting

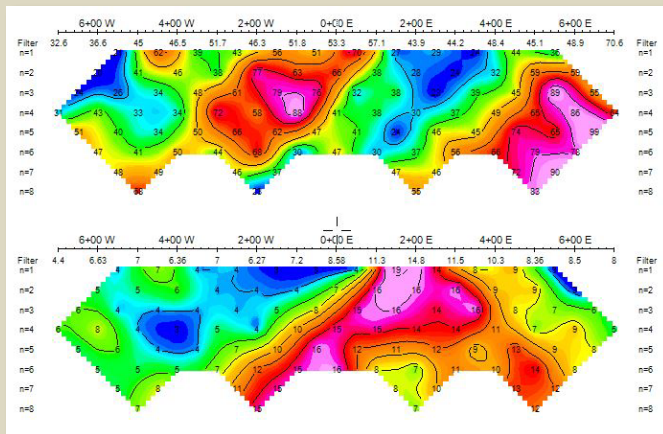
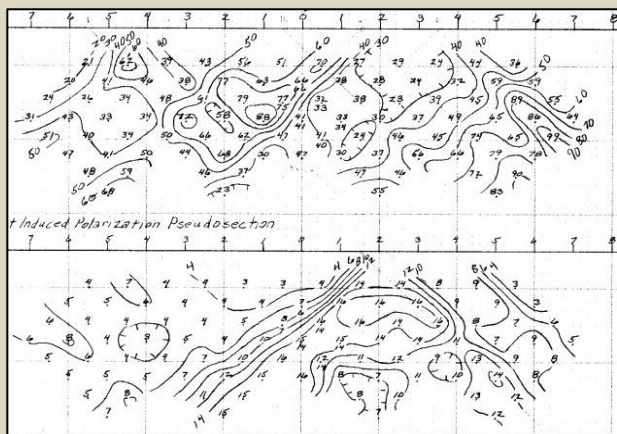
- Professional map generation and comprehensive statutory report writing, ensuring all deliverables meet or exceed State Government requirements and industry standards.

BRINGING LEGACY DATA TO LIFE

Before and after: Three examples of what becomes possible when locked legacy data is properly recovered.

CASE 01 - GEOPHYSICS

Hand-drawn IP pseudosections from a 1970s survey - digitised, re-plotted and reformatted for modern 2D inversion modelling. Data that was uninterpretable in its original form is now inversion-ready.



CASE 02 - DRILL LOGS

Handwritten drill-logs: Interval lithology and mineralisation data extracted from handwritten field logs into a structured, standardised database - with HITL review ensuring geological consistency throughout. Data templates are entirely flexible depending on the client needs

METRES	FACIES	GRAPHIC	DESCRIPTION
FROM	TO	INTERVAL	LOG
9.1m	74.15m	64.05m	1-9.1m REEF BLOCK (RENALIS)
			9.1-24.15m LINE GRAINSTONE, STYLOBEDDED, col gray white locally oxidized yellowish, minor Reef blocks/clasts. Disseminated and veinlet Marcasite (minor) with trace Sphalerite and occasional trace Galena
74.15	117.55	43.40m	74.15-117.55m LINE GRAINSTONE, col cream grey, thick bedded high angle stylolites, marine cement & mar cmt grainflows. Solution cavities with calcite and concentric. Marcasite i.e. 76-77.3m 5% sph, 105-106.55m 30% ma, 0.5% sph
117.55	141.05	23.50m	117.55-141.05m RENALIS REEF BLOCKS with interbeds of partly dolomitized lime GRAINSTONE, weak Marcasite, trace Sphalerite
141.05	201.4m	60.35m	141.05-201.4m Dolomite, strongly vuggy, locally calcite fill cavities, stylolites, minor Reef blocks/clasts. Concentrations at 178-182m 14% ma, 2% sph; 192-194m 3% ma 198-202 6% ma tr sph locally saddle dolomite
201.4	224m	22.6m	201.4-224m Dolomitized PACKSTONE / GRAINSTONE weak mineralisation
224	242.5	18.1m	224-242.5m Vuggy Dolomite calc fill cavities, main mineralisation 224-226m 5% ma 0.75% sph, 238-240 2% ma 2% sph 0.1% ga
242.5	301.1	58.6m	242.5-301.1m Dolomite, partly vuggy, light grey, reefal blocks, /laminae calcite, mainly weak mineralisation with concentration at 278-290 1.5% ma 0.75% sph 0.2% ga; weak marine cemented brecciation 242-258m



A	B	C	F	G	H
HoleID	DepthFrom	DepthTo	Lithology_Main	Colour	Description
FD046	1	9.1	Reef (Renalics)		Reef block (renalics)
FD046	9.1	74.15	Grainstone	gray white	Lime grainstone, stylolbedded, col gray white locally oxidized yellowish, minor reef blocks/clasts. Disseminated and veinlet marcasite (minor) with trace sphalerite and occas trace galena.
FD046	74.15	117.55	Grainstone	Cream-grey	Lime grainstone, col cream gray, thick bedded high angle stylolites, marine cement & mar cmt grainflows. Solution cavities with calcite and concent. Marcasite i.e. 76-77.3m 3% ma 2% sph; 105.15-106.55m 30% ma 0.5% sph.
FD046	117.55	141.05	Renalics Limestone		Renalics reef blocks with interbeds of partly dolomitized lime grainstone, weak marcasite, trace sphalerite.
FD046	141.05	201.4	Dolomite		Dolomite, strongly vuggy, locally calcite fill cavities, associated mineralisation concentrations at 178-182m 14% ma, 2% sph; 192-194m 3% ma 198-202 6% ma tr sph locally saddle dolomite.
FD046	201.4	224	Packstone		Dolomitized packstone/grainstone weak mineralisation.
FD046	224	242.5	Dolomite		Vuggy dolomite + calc fill cavities, main mineralisation 224-226m 5% ma 0.75% sph, 238-240 2% ma 2% sph 0.1% ga.
FD046	242.5	301.1	Dolomite		Dolomite, partly vuggy, light gray, reefal blocks, /laminae calcite, mainly weak mineralisation with concentration at 278-290 1.5% ma 0.75% sph 0.2% ga; weak marine cemented brecciation 242-258m.

CASE 03 - GEOREFERENCING

A 1970s geological plan, carrying no coordinate data, georeferenced by matching drainage and topographic features to current satellite imagery. Positional confidence fully documented.

