



Occurrence Details

Occurrence Number: 1050 019
Occurrence Name: Jason Main
Occurrence Type: Hard-rock
Status: Deposit
Date printed: 4/29/2025 2:25:25 AM

General Information

Primary Commodities: lead, silver, zinc
Secondary Commodities: barite
Aliases: Jason
Deposit Type(s): Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex)
Location(s): 63°8'55" N - -130°15'52.96" W
NTS Mapsheet(s): 105001
Location Comments: Location from map on Fireweed Zinc website (2022)
Hand Samples Available: Yes
Last Reviewed:

Capsule

Work History

Staked as Jason cl 1-44 (Y96192) in Aug/74 by Ogilvie Joint Venture (C.L. Smith, Brinex Ltd, Mitsubishi Metal Corporation and Ventures West Capital Ltd), which carried out geological mapping, grid geochemical sampling, gravity surveying from 1975 to 1976; drilled 7 holes (640 m) in 1975; staked Jason cl 45-176 (Y97986) in Aug/75; staked Mike cl 1-2 (YA00024) in Jun/76; drilled 23 holes (3 172.4 m) from July to Oct/76; staked Ace cl 1-38fr (YA07470) in Sep/76; staked Jason 189-191fr (YA15148) in May/77; 83 shallow overburden holes with a rotary drill (1 398 m), 6 diamond holes (1 405 m), and attempted a single deep hole (166.7 m) on the Jason 179 claim using an oil rig drill which was abandoned before the target depth was reached from July to Aug/77. The Smith and Ventures West interests were assigned to Ogilvie Mineral Corporation Ltd in 1978, which drilled 17 holes (3 082.1 m) later that year and staked Jason cl 198-222fr (YA38265) in Sep/78. In 1979 the property was optioned by Pan Ocean Oil Ltd, which drilled 10 holes (2 212.9 m) from August to Oct/79; staked Jason cl 223-240fr (YA41288) in Sep/79; 20 holes (4 953.3 m) from June to Oct/80; and 27 holes (11 169.7 m) from May to Nov/81. Pan Ocean was acquired in late 1981 by Aberford Resources Ltd, which carried out environmental studies and drilled 5 holes (2 866.6 m) in 1982. Aberford carried out joint feasibility and environmental studies with Hudson Bay Mining and Smelting Company Ltd on the Jason and nearby Tom (Minfile Occurrence #1050 001) deposits and transferred its interest to Abermin Corporation in 1985. Abermin's interest was acquired by CSA Gold Corporation and all owners transferred their Jason interest into a private Yukon corporation, MacPass Resources Ltd in 1990. Phelps Dodge Corporation of Canada Ltd optioned the property in 1990, carried out VLF-EM and magnetometer geophysical surveying and drilled 12 holes (2 667.7 m) on reconnaissance targets outside the known mineralized zones. Phelps Dodge drilled an additional 8 holes (2 553 m) in 1991 before relinquishing its option in 1992.

Capsule Geology

Two separate deposits of stratiform galena, sphalerite and pyrite are hosted by Lower Earn Group shale and coarse turbidites of Upper Devonian age. The Main and South zones occur on opposite limbs of a shallowly east-plunging isoclinal fold known as the Jason syncline. The epigenetic End zone lies 4.5 km to the northwest in a small fault-bounded slice of Lower Earn Group rocks surrounded by Ordovician to Silurian Road River Group. Detailed studies by Turner (1990) have shown that the deposits occur at the same stratigraphic level as the Tom deposit (Minfile Occurrence #1050 001), 5 km to the northeast. Total geological reserves for the Jason deposit were calculated in 1983 by Aberford as 14 100 000 tonnes grading 7.09% Pb, 6.57% Zn and 79.9 g/t Ag. Reserves were later recalculate by Hudson Bay and Aberford personnel in 1985 as 10 865 870 tonnes grading 7.12% Zn, 6.76% Pb and 77.05 g/t Ag. The Main zone consists of a single lens of stratiform sulphide, barite and chert up to 20 m thick, interbedded with carbonaceous mudstone and diamictite overlying siltstone at the base of the Tom Member of the Portrait Lake Formation. It has a strike length of approximately 700 m and a downdip extent of 500 m. Thickness varies from 3 to 18 m. Recalculated geological reserves for the Main zone are 4 546 371 tonnes grading 2.08% Pb, 9.75% Zn and 2.05 g/t Ag. The South zone consists of at least two stacked stratiform sulphide-barite-chert lenses. The upper lens is 1 200 m long and up to 20 m thick and is interbedded with the same diamictite and mudstone as the Main zone. The lower lens is a 300 x 400 m wedge shaped body up to 40 m thick which lies 10 m below the upper lens, from which it is separated by siliceous shale and diamictite. The South zone lenses are cut off to the southwest against Road River Group rocks by a northwest-striking fault. Recalculated geological reserves for the South zone are 5 770 091 tonnes grading 5.37% Pb, 2.90% Zn and 71.92 g/t Ag. The End zone consists of baritic massive sulphide. Recalculated geological reserves for the End zone are 549 408 tonnes grading 10.30% Pb, 2.78% Zn and 80.14 g/t Ag.. Local syngenetic structures comprise hydrothermally altered rounded mudclasts and siderite vein fragments in an altered and sulphide-bearing matrix of clay, quartz, muscovite, siderite and disseminated pyrite, sphalerite, galena, chalcopyrite and pyrrhotite. Near vent sites, wallrocks are strongly silicified, and conglomerate units are cemented by pyrite, ankerite, quartz, galena and sphalerite. The conglomerate units are wedge shaped, thickening toward the hydrothermal vent and are inferred to represent debris derived from a submarine scarp associated with syngenetic faulting. Geochemical studies have demonstrated a clear zoning of metal ratios and hydrothermal facies both upward and laterally away from the vent. Lead to zinc ratios and thickness of each sulphide lens decrease away from the vent. A number of hydrothermal facies have been identified:

- (1) Proximal (vent) facies: (a) Breccia pipe. A 300 x 50 m breccia pipe consisting of fragments of silicified siltstone in a siderite-pyrrhotite-quartz-ankerite-muscovite-galena matrix. (b) Upper proximal facies (massive pyrite). Consists of massive pyrite, cut by sphalerite and galena veinlets and quartz-sphalerite-galena-chalcopyrite veinlets. Associated with pyrrhotite and bitumen which increase downward. (c) Middle proximal facies (iron carbonate). Beds of massive siderite and ankerite containing disseminations, veinlets and pods of galena, pyrrhotite, pyrite, quartz, muscovite, pyrobitumen and minor sphalerite and chalcopyrite. (d) Lower proximal facies (massive lead-zinc-iron sulphide).
- (2) Quartz-sulphide facies: laminated pyrite, sphalerite and quartz interbedded with carbonaceous chert. A zone of silicification and bleaching separates this facies from rocks of the vent complex.
- (3) Barite-sulphide facies: forms the largest part of the Jason deposit and consists of finely bedded barite, chert, sphalerite and galena and siliceous mudstone.
- (4) Distal barite-sulphide-chert facies: shows evidence of small-scale depositional cycles.

Fluid inclusions in siderite, ankerite and quartz from the vent complex indicate the hydrothermal fluids were Na-Ca chloride brines containing about 9 weight per cent NaCl equivalent. Homogenization temperatures range from 181 to 284 C (average 252). Isotopic ratios are consistent with the mixing of sea water with a plume of hydrothermal derived fluid from a radiogenic crustal source, at a submarine vent. The 1991 drilling tested for possible extensions to the End, South and Main zones, and two reconnaissance targets. Hole 91-102 tested the downdip extension of the End zone and encountered a long sequence of altered mudstone cut by quartz-ankerite stockworks with minor galena and sphalerite, but no massive sulphides.

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Work History		
Date	Work Type	Comment
12/31/1991	Drilling	Eight holes, 2,553 m.
12/31/1990	Drilling	Twelve holes, 2,667 m.
12/31/1984	Studies	
12/31/1984	Studies	
12/31/1983	Studies	
12/31/1983	Studies	
12/31/1982	Drilling	Five holes, 2,867 m.
12/31/1982	Studies	
12/31/1982	Geology	
12/31/1981	Drilling	Twenty-seven holes, 1,170 m.
12/31/1980	Drilling	Twenty holes, 4,953 m.
12/31/1979	Drilling	Ten holes, 2,182 m.
12/31/1978	Drilling	Seventeen holes, 2,164 m.
12/31/1977	Drilling	Six holes, 1,405 m. One deep hole with an oil rig was abandoned at 166.7 meters depth.
12/31/1977	Drilling	Eighty-three holes, 1,398 m.
12/31/1976	Ground Geophysics	
12/31/1976	Drilling	Twenty-three holes, 3,172.4 m.
12/31/1976	Geology	
12/31/1976	Geochemistry	
12/31/1975	Ground Geophysics	
12/31/1975	Drilling	Seven holes, 640 m.
12/31/1975	Geology	
12/31/1975	Geochemistry	Also silt sampling.
12/13/1990	Ground Geophysics	Also VLF-EM survey.

Assessment Reports that overlap occurrence					
Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
097157	2017	Diamond Drilling, Geophysics and Geochemistry Work Completed on the Jason-Mac Claims, Yukon Territory, Canada	Magnetic - Airborne Geophysics, VTEM - Airborne Geophysics, Diamond - Drilling, Detailed Bedrock Mapping - Geology, LIDAR - Remote Sensing	14	2202
097195	2007	2011 Summary Report Diamond Drilling and Exploration at the Tom-Jason Property	Preliminary Economic Assessment - Studies		
093827	1997	1997 Geological Assessment Report on Emerald Lake Claims	Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry		
093025	1991	Assessment Report on the 1991 Diamond Drill Program Jason Property	Diamond - Drilling	5	1531.50
091790	1985	Feasibility Study on Tom/Jason Project	Environmental Assessment/Impact - Studies, Pre-feasibility - Studies		
091428	1982	Ogilvie Joint Venture Jason Property 1982 Exploration Results	Diamond - Drilling	4	2866.64
091422	1982	Ogilvie Joint venture Jason Property 1982 Environmental Programmes	Environmental Assessment/Impact - Studies		
090986	1981	[Diamond Drill Report Jason Property]	Diamond - Drilling	27	11169.69
090712	1980	[Diamond Drilling Report Jason Property]	Diamond - Drilling	20	4953.30
091288	1979	Drill Logs for Drilling on Jason and Ace claims	Diamond - Drilling	9	1935.78
091286	1978	[Diamond Drill Summary on Jason Claims]	Diamond - Drilling	17	3082
097015	1977	[drill logs and plan map of drilling on the Jason Property]	Rotary - Drilling	82	1228.95
091287	1976	Drill Logs for Drilling on Jason property	Diamond - Drilling	10	1135.30
091285	1976	Diamond Drilling on Jason Claims	Diamond - Drilling	8	4027

090153	1976	Geophysical Report on the Jason Claims	Soil - Geochemistry, Gravity Survey - Ground Geophysics, Line Cutting - Other		
092866	1976	[Orthophoto Survey MacMillan Pass]	Orthophoto - Airphotography		
090017	1975	Geological Report on the Jason Claims	Regional Bedrock Mapping - Geology		
060458	1971	Compilation Geology Map, Macmillan Pass Area, 105001	Data Compilation - Pre-existing Data		
019035	1968	1968 Progress Report and Proposed Program 1969 Itsi Project	Silt - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other		

Resource/Reserve

Year	Zone	Type	Commodity	Grade	Tonnage	Amount	Reported Amount	43-101 Compliant	Cut-off
2007	JASON - TOTAL RESERVES (UNDERGROUND)	Inferred	lead	3.96 %	11,000,000		No	Yes	Unknown
Cot-off grade equals US\$0.57/lb Zinc, US\$0.35/lb Lead and US\$7.00/oz Silver. Metal prices were provided by HudBay.; Technical Report on the Tom and Jason Deposits, Yukon Territory, Canada. Prepared for HudBay Minerals Inc. by D.W. Rennie - Scott Wilson Roscoe Postles Associates Inc. Available on SEDAR.									
2007	JASON - TOTAL RESERVES (UNDERGROUND)	Indicated	lead	7.42 %	1,460,000		No	Yes	Unknown
Cot-off grade equals US\$0.57/lb Zinc, US\$0.35/lb Lead and US\$7.00/oz Silver. Metal prices were provided by HudBay.; Technical Report on the Tom and Jason Deposits, Yukon Territory, Canada. Prepared for HudBay Minerals Inc. by D.W. Rennie - Scott Wilson Roscoe Postles Associates Inc. Available on SEDAR.									
2007	JASON - TOTAL RESERVES (UNDERGROUND)	Inferred	silver	36.4 g/t	11,000,000		No	Yes	Unknown
Cot-off grade equals US\$0.57/lb Zinc, US\$0.35/lb Lead and US\$7.00/oz Silver. Metal prices were provided by HudBay.; Technical Report on the Tom and Jason Deposits, Yukon Territory, Canada. Prepared for HudBay Minerals Inc. by D.W. Rennie - Scott Wilson Roscoe Postles Associates Inc. Available on SEDAR.									
2007	JASON - TOTAL RESERVES (UNDERGROUND)	Indicated	silver	86.7 g/t	1,460,000		No	Yes	Unknown
Cot-off grade equals US\$0.57/lb Zinc, US\$0.35/lb Lead and US\$7.00/oz Silver. Metal prices were provided by HudBay.; Technical Report on the Tom and Jason Deposits, Yukon Territory, Canada. Prepared for HudBay Minerals Inc. by D.W. Rennie - Scott Wilson Roscoe Postles Associates Inc. Available on SEDAR.									
2007	JASON - TOTAL RESERVES (UNDERGROUND)	Inferred	zinc	6.75 %	11,000,000		No	Yes	Unknown
Cot-off grade equals US\$0.57/lb Zinc, US\$0.35/lb Lead and US\$7.00/oz Silver. Metal prices were provided by HudBay.; Technical Report on the Tom and Jason Deposits, Yukon Territory, Canada. Prepared for HudBay Minerals Inc. by D.W. Rennie - Scott Wilson Roscoe Postles Associates Inc. Available on SEDAR.									
2007	JASON - TOTAL RESERVES (UNDERGROUND)	Indicated	zinc	5.25 %	1,460,000		No	Yes	Unknown
Cot-off grade equals US\$0.57/lb Zinc, US\$0.35/lb Lead and US\$7.00/oz Silver. Metal prices were provided by HudBay.; Technical Report on the Tom and Jason Deposits, Yukon Territory, Canada. Prepared for HudBay Minerals Inc. by D.W. Rennie - Scott Wilson Roscoe Postles Associates Inc. Available on SEDAR.									
1985	JASON - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	lead	6.76 %	10,865,870		No	No	Unknown
Reserves are contained in three zones; Main, South and End.; Assessment Report #091791 by G. Brown et al.									
1985	JASON - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	silver	77.05 g/t	10,865,870		No	No	Unknown
Reserves are contained in three zones; Main, South and End.; Assessment Report #091791 by G. Brown et al.									
1985	JASON - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	zinc	7.12 %	10,865,870		No	No	Unknown
Reserves are contained in three zones; Main, South and End.; Assessment Report #091791 by G. Brown et al.									
1983	JASON - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	lead	7.09 %	14,100,000		No	No	Unknown
Reserves are contained in three zones; Main, South and End.; Mineral Deposits of Northern Cordillera in CIM Special Volume 37, p. 87-99 by R.J. Bailes et al.									
1983	JASON - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	silver	79.9 g/t	14,100,000		No	No	Unknown
Reserves are contained in three zones; Main, South and End.; Mineral Deposits of Northern Cordillera in CIM Special Volume 37, p. 87-99 by R.J. Bailes et al.									
1983	JASON - TOTAL RESERVES (UNDERGROUND)	Historical Estimate	zinc	6.57 %	14,100,000		No	No	Unknown
Reserves are contained in three zones; Main, South and End.; Mineral Deposits of Northern Cordillera in CIM Special Volume 37, p. 87-99 by R.J. Bailes et al.									

Drill core at YGS core library

Number	Property	Year Drilled	Core Size	Photos	Data
QJV DDH-82-86	Jason	1982	HQ	20	3
QJV DDH-82-87	Jason	1982	HQ-NQ	25	4
QJV DDH-82-88	Jason	1982	HQ-NQ-BQ	8	4
QJV DDH-81-68A	Jason	1981	NQ	16	2
QJV DDH-81-68D	Jason	1981	NQ	16	3
QJV DDH-81-70	Jason	1981	NQ	0	4
QJV DDH-81-74	Jason	1981	HQ	17	2
QJV DDH-81-76	Jason	1981	HQ	12	2
QJV DDH-81-83	Jason	1981	NQ	2	4
QJV DDH-82-86A	Jason	1981		8	3
QJV DDH-80-56B	Jason	1980	NQ	14	2

OJV DDH-80-59	Jason	1980	NQ	12	2
OJV DDH-80-60	Jason	1980	HQ-NQ	6	1
OJV DDH-79-51A	Jason	1979	HQ-NQ	14	2
OJV DDH-78-30	Jason	1978	HQ	4	1
OJV DDH-77-25	Jason	1977	HQ	12	1