

Occurrence Details

Occurrence Number: 105I 037 Occurrence Name: Anniv Central Occurrence Type: Hard-rock Status: Deposit Date printed: 6/16/2025 12:42:49 PM

General Information

Primary Commodities: lead, zinc Secondary Commodities: silver Aliases: Howards Pass, Selwyn Project, Anniv East, Anniv Central, Anniv West Deposit Type(s): Sediment hosted Sedimentary Exhalative Zn-Pb-Ag (Sedex) Location(s): 62°33'52" N - -129°31'38" W NTS Mapsheet(s): 105112 Location Comments: Location from map in 2012 NI43-101 technical report Hand Samples Available: No Last Reviewed:

Capsule

Work History

Staked within a block of R claims (not staked sequentially, lowest claim number Y64680 = claim #16, 74 claims in total), between in Aug/72 and Oct/72 by Canex Placer Ltd, a wholly owned subsidiary of Placer Development Ltd. The company previously carried out a multi-year regional geochem program beginning in 1968 which led to the discovery of mineralization at the XY occurrence (Minfile Occurrence 1051 012) in the spring of 1972 and the subsequent staking of these claims and others in the Howard's Pass area. Beginning in Sep/72, the company added the OP claims (#1 = Y64837) along strike to the northwest and the Don claims (#1 = Y64845) to the southeast respectively. In Jul/73Canex Placer staked Anniv cl 1-16 (Y73582) to the north. The company explored with detailed mapping and grid soil sampling in 1973 and a large bulldozer trenching program in 1974.

In 1975, Canex entered a joint venture with Essex Minerals Company (a wholly owned subsidiary of U.S. Steel Corporation). The joint venture drilled 4 holes (304.8 m) on the Anniv Central occurrence (occurrence A) and staked 100 Par (Y93611) and additional OP claims in Sep/75. The group drilled 30 diamond drill holes (3,048 m) in 1976, 20 holes (5,455.9 m) in 1978 and 10 holes (3,650.6 m) in 1979. Essex Minerals' interest in the property was transferred to Cygnus Mines Ltd in Apr/82.

An economic analysis completed at the end of 1982 by Placer and Cygnus concluded that mining was not economically viable at that time. Placer reported a historical resource at the end of 1982 for the Anniv Central (occurrence A) and East (occurrence B) zones (deposits). Placer Development Ltd was amalgamated into Placer Dome Inc in Aug/87. Placer Dome performed cleanup work on the property in 1991.

In Jul/2000 Copper Ridge Explorations Inc acquired an option to purchase a 100% interest in the Howard's Pass property, including this occurrence. The agreement called for a 150 day due diligence followed by a pre-feasibility study. In Sep/2000 Copper Ridge signed a letter of agreement with Billiton Metals Canada Inc for a joint evaluation and possible development of the property. Billiton provided Copper Ridge with \$200,000.00 through a private placement, which Copper Ridge used to fund a diamond drill program. Copper Ridge collared 8 diamond drill holes (717 m) on the Anniv Central (5 holes) and Don (Minfile Occurrence 105I 068 - 3 holes) showings as part of their due diligence. In Nov/2000 Billiton informed Copper Ridge that they would not proceed with the proposed joint venture. In Dec/2000 Copper Ridge failed to make a payment as required by the option agreement and the agreement was cancelled.

In May/2005 Pacifica Resources Ltd entered into a Letter of Intent to purchase a 100% interest in the Howard's Pass property. The agreement was signed between Pacifica and Placer Dome (CLA) a wholly owned subsidiary of Placer Dome Inc (51% owner) and Cygnus Mines Ltd (49% owner). The agreement was formally approved in Aug/2005.

Pacifica Resources drilled 53 diamond drill holes (8,286.9 m) on the Howard's Pass property in 2005. Twelve holes (3,776.6 m) were collared on the Anniv Central zone and ten holes (4,000.3 m) on the Anniv East zone. The holes were designed to provide additional geological information and to further define surface resources in the area. The company also carried out Dense Media Separation test work on grab samples collected during previous underground mining programs and from diamond drill core samples. Elsewhere on the property the company carried out regional mapping and soil sampling programs.

In Feb/2006 Pacifica released an updated, National Instrument 43-101 compliant mineral resource estimate for the newly designated Anniv Central and Anniv East open pit "deposits". In Mar/2006 Barrick Gold Corporation acquired Placer Dome Inc. In May 2006 Barrick sold Placer Dome's 51% interest and other mines and exploration properties to Goldcorp Inc. In Jul/2006 Goldcorp sold Placer Dome's 51% interest in the Howard's Pass property to Terrane Metals Corp.

During 2006, Pacifica completed 191 diamond drill holes (131,550.2 m) of which 53 holes (37,081.0 m) targeted the Anniv Central deposit (8 of these holes targeted the Anniv West zone) and 36 holes (21,327.1 m) targeted the Anniv East deposit. The company also continued Dense Media Separation test work, geochemical sampling, commenced baseline environmental and engineering studies and surveyed all previous drill hole locations, roads and grids in order to digitize and compile all historical geological data. Given the high number of holes drilled and assay samples collected, Pacifica reported 2006 drilling results well into the Spring of 2007.

In Jan/2007 Pacifica released a preliminary assessment report for the development of the Howard's Pass project. The assessment indicates excellent potential for a long life mine, having large-scale, low cost zinc and lead production. The company used the results to help plan future exploration and engineering work.

On January 29, 2007 Pacifica Resources announced a plan of re-organization in which the Howard's Pass project would be spun off to a new company, Selwyn Resources Ltd and the company's remaining properties would be transferred to a new company Savant Exploration that. Pacifica shareholders received shares in Savant Exploration as compensation for the transfer of assets from Pacifica to Savant. The agreement was approved on May 31, 2007 and completed on June 6, 2007 at which time control of the Howard's Pass property, commonly referred to as the Selwyn Project was transferred to Selwyn Resources and the charter of Pacifica Resources was cancelled.

At the beginning of Apr/2007 Selwyn announced an updated National Instrument 43-101 compliant mineral resource estimate for the Anniv Central and Anniv East deposits and an initial resource for the newly designated Anniv West extension (occurrence C) (Pearson and O'Donnell, April 2007). This estimate remains the most current for the Anniv Central and East deposits, as of March 2014. During 2007 Selwyn collared 106 diamond drill holes (37,208.6 m) on the Selwyn Project. None of the holes were drilled in the vicinity of the Anniv deposits. The company did continue studying drill and assay data from the 2006 drilling season with the aim of better defining the various parameters of the Anniv deposits. The company also continued environmental and engineering studies, opened a new camp in the Don Valley and closed the camp located near the XY central zone.

An updated resource estimate dated March 14, 2008 (by Pearson and O'Donnell) updated the INFERRED resource for the ANNIV West deposit. The 2007 estimates for the Anniv WEST and ANNIV Central remained unchanged.

Selwyn collared 13 diamond drill holes (3 856.9 m) on the Howard's Pass property in 2008 and 10 diamond drill holes (4,214 m) in 2009. None of the holes targeted the Anniv area. In mid-2009 Selwyn opened discussions with various companies recarding the formation of a possible strategic partnership. The company in Dec/2009 announced that they had signed a binding Framework Agreement

with Yunnan Chihong Zinc & Germanium Company Ltd (China), whereby both companies would form a joint venture company to hold all assets associated with the Selwyn project. In return for a 50% interest in the joint venture Yunnan Chihong deposited 100 million dollars in cash irrevocably to a bank account for the joint venture to use to fund development of the Selwyn project. As part of the agreement Yunnan Chihong agreed to fund all of Selwyn Resources direct costs incurred from July 1, 2009 on the Selwyn project.

On January 5, 2010 Selwyn Resources announced that they had engaged Wardrop Engineering Inc to start a Phase 1 work program leading to the completion of a NI 43-101 compliant feasibility study on the Selwyn project. The company hopes to complete the study by the end of 2010.

On August 18, 2010 Selwyn announced the completion of the joint venture with Yunnan Chihong and the formation of a new company Selwyn Chihong Mining Ltd. Selwyn Resources transferred all Selwyn Project claims, equipment, permits and licenses to the new company. At the same time the joint management committee approved in principal a predevelopment budget of 89 million dollars for 2010 and 2011. The money will be directed to the advancement of permitting, completion of the feasibility study and related engineering and resource definition drilling from both surface and underground.

A September 2012 report by Kirkham Geosystems lists a global resource for the Selwyn Project, which includes the 2007 and 2008 estimates for the Anniv EAST, CENTRAL AND WEST deposits. In 2014, Selwyn Chihong completed 55,000 m of drilling on a number of the deposits making up the project, upgraded the Howard's Pass access Road (HPAR), conducted baseline environmental studies and completed an updated Preliminary Economic Assessment (PEA).

In 2015, the company completed a Prefeasibility Study (PFS), secured a permit to widen the HPAR, continued the environmental baseline studies, drilled 10,000 m and completed a Socio-economic Participation Agreement (SEPA) with the Kaska First Nation.

From 2016 to 2022, the company conducted reclamation on many of the exploration and camp sites road and camp upgrades.

Capsule Geology

The project is located in Selwyn Basin, a region of deep-water offshelf sedimentation that persisted from Late Precambrian to Middle Devonian time. Its basal deposits consist of late Precambrian riftrelated clastic sediments. These are overlain by rift clastics of late Devonian age. On the north-eastern side of the project are time-equivalent shallow shelf strata of Mackenzie Platform. Along its southwestern margin is a Silurian to Devonian carbonate-clastic shelf of the Cassiar Platform. Its southwestern limit is essentially the limit of the miogeocline as presently preserved in the Yukon.

Regionally, Selwyn Basin stratigraphy overlies a basement of Upper Proterozoic to Lower Cambrian maroon to dark blue-grey weathering shale assigned to the Narchilla Formation of the Hyland Group. This unit is conformably overlain by the Upper Cambrian to Lower Ordovician Rabbitkettle Formation. The Rabbitkettle Formation is comprised of an Upper member consisting of grey weathering fine crystalline nodular limestone and a Lower member consisting of grey orange weathering, argillaceous to silty limestones usually limited to beds of less than 10 cm. Pacifica/Selwyn Resources report the presence of a Transition Formation between the Rabbitkettle Formation and the overlying Duo Formation. This unit, identified in drill core, consists of thin interlaminations of grey limestone and buff coloured shale and is generally well cleaved.

The Transition Formation is overlain by the Ordovician to Middle Silurian Road River Group which is divided into the Duo Lake and Steel Formations. Various operators working in the area have locally renamed the Duo Formation the Howard's Pass Formation and have subdivided it into various units. The local operators have divided the Dou Formation into five member units measuring 300 m thick. The lowest member is a pyritic siliceous shale member, which is overlain by a calcareous mudstone member and a lower cherty mudstone member. These members are overlain by the Active member, a heterogeneous mudstone, limestone, chert that hosts the region's abundant sulphide mineralization in lamella within a poorly preserved graptolite horizon. An upper siliceous mudstone member tops the formation. The Steel Formation which measures approximately 140 m thick and consisting of a flaggy mudstone containing orange weathered siliceous argillite in beds 10-80 cm thick overlies the Howard's Pass Formation.

The Road River Group is overlain by the Lower to Upper Devonian Portrait Lake Formation of the Lower Earn Group. The Portrait Lake Formation is comprised of a Lower, Middle and Upper member. The Lower Member consists of a dark brown weathering, silty shale and shale in beds up to 420 m thick. The Middle member consists of a black weathering, massive pebble conglomerate up to 195 m thick and the Upper Member consists of a gun-blue weathering black platy siltstone up to 260 m thick.

The Portrait Lake Formation is overlain by the Upper Devonian to Middle Mississippian Prevost Formation of the Upper Earn Group. It also divided into Lower, Middle and Upper members. The Lower member consists of a grey weathering, dark grey, medium to coarse-grained chert-quartz sandstone up to 160 m thick. The Middle member consists of brown weathering, dark grey, thin bedded shale and siltstone measuring up to 90 m thick and an Upper member consisting of coarse-grained, poorly sorted, chert-quartz sandstone and conglomerate in beds up to 300 m thick. The entire sequence is intruded by various Middle to Late Cretaceous stocks and batholiths ranging in composition from intermediate to granitic assigned to the Selwyn plutonic suite.

Historical drilling and geological mapping carried out by Placer Development suggested that the Anniv and the XY (Minfile Occurrences 1051 037 and 012) sedimentary-exhalative deposits occurred in separate sub-basins along the base of a paleo-slope of the eastern Selwyn Basin. Later geological mapping and diamond drilling carried by Pacifica/Selwyn Resources indicated the lead-zinc mineralization hosted by the Selwyn project was part of a long-lived, single mineralizing event. As proof of this theory the companies reported that the sulphide textures, mineralogy and thickness are similar in each of the 15 deposits identified to date. The hydrothermal fluids that formed the different deposits are also isotopically identical throughout the property. The companies believe the strataform and tabular Active Member was affected by post-depositional structural deformation which likely accounts for the thickening and thinning of the Active Member across the property. Understanding the timing of the faults with respect to each other will aid future exploration programs in locating extensions of the known deposits and locating new resources.

Zinc and lead mineralization at the Selwyn project is hosted in the Active Member and consists of alternating layers of carbonaceous mudstone, limestone and chert, interlayered with stratabound laminated sulphide rich bands. The sulphides are fine grained and dominantly sphalerite and galena with minor pyrite. The mineralized horizon is generally 20 to 30 m thick and is texturally and mineralogically consistent throughout the property.

Metallurgical test work has confirmed that high-grade zinc and lead concentrate can be achieved. These concentrates have low levels of deleterious elements. Floatation test work indicates that a zinc concentrate grading 55 to 57% can be produced with an overall recovery of about 80% and a lead concentrate grading 65 to 70% lead with a recovery of approximately 70%. The ore will require fine grinding and floatation processing which will include the removal of carbon prior to producing high grade concentrates. Test work completed to date on the application of dense media separation indicates that simple gravity processing could provide an effective means of upgrading run-of-mine ores.

There are three Anniv deposits; the Anniv Central, the Anniv East and the Anniv West. Canex Placer discovered strongly oxidized float at several places on surface. The float was quite similar in mineralogy and stratigraphic setting to the company's original discovery at the XY deposit, located 22.5 km to the southeast. Drilling in the mid 1970s confirmed the presence of a sedimentary exhalative lead-zinc deposit at Anniv Central measuring 1,524 m long, 335 m wide and up to 45.7 m thick (average 12.2 m). The Anniv deposits appear to be more continuous and less contorted than the XY deposit and returned average combined grades of about 8 to 9% zinc and lead and 17.1 to 34.3 g/t silver. The 1978 and 1979 drilling extended the Anniv mineralization from the valley of Don Creek, 7 km to the northwest and showed that it resembles the XY deposit to lappeared to lack a high grade core.

Placer Development reported a historical resource at the end of 1982 for the Anniv Central and East deposits. Employing a 4% zinc and lead cut-off the company calculated that the Anniv Central zone hosted an indicated mineral inventory of 22,245,000 tonnes grading 5.25% zinc and 2.39% lead while the Anniv East zone hosted an indicated mineral inventory of 33,156,000 tonnes grading 5.325 zinc and 1.74% lead. In the inferred mineral inventory class, the Anniv Central zone hosts 118,698,000 tonnes grading 5.07 % zinc and 1.73% lead, while the Anniv East zone hosts 155,730,000 tonnes grading 5.37% zinc and 1.73% lead. These figures pre-date NI 43-101 standards and are considered a historical resource.

Copper Ridge Explorations' 2000 drill program was designed to verify previous drill results, provide in-fill data, expand the known resource and provide mineralized samples for metallurgical testing. The program successfully confirmed the potential for significant near-surface, open pit mineralization in two areas, Anniv Central and Don Valley, within the Anniv sub-basin.

The 2005 drill program by Pacifica Resources was designed to better define the distribution and the grade of the open pit potential of the Anniv Central and Anniv East deposits. Pacifica used the 2005 drill results to prepare the first NI 43-101 compliant mineral resource estimate for the two deposits. Using a 2% zinc cut-off Pacifica determined that the Anniv Central deposit hosted an indicated mineral resource of 12,590,000 tonnes grading 4.91% zinc and 1.66% lead and a inferred mineral resource of 20,970,000 tonnes grading 5.38% zinc and 1.79% lead. The company also calculated that the Anniv East deposit hosted an inferred mineral resource of 18,380,000 tonnes grading 4.46% zinc and 1.28% lead.

The 2006 diamond drill program carried out in the Anniv area was designed as in-fill drilling targeted towards increasing the confidence in both the known inferred mineral resources and adjacent areas of mineral potential. Drilling on the Anniv Central deposit increased mineral resources in the potential open pit and delineated significant higher grade mineral potential below the range of the open-pit. The drilling also outlined potential mineralization along strike to the northwest which the company designated the Anniv West extension deposit. At the Anniv East deposit diamond drilling extended the size and tonnage of the open pit deposit.

On April 2, 2007 Pacifica announced updated mineral resource estimates for the Anniv deposits (Pearson and O'Donnell, April 2007.) Based on the results of the 2006 drilling program and employing a 2% zinc cut-off, the company estimated that the Anniv Central deposit hosts an indicated mineral resource of 17,980,000 tonnes grading 4.52% zinc and 1.51% lead and an inferred mineral resource of 40,120,000 tonnes grading 4.63% zinc and 1.48% lead. The Anniv East deposit is calculated to host an indicated mineral resource of 16,920,000 tonnes grading 4.15% zinc and 1.20% lead and an

inferred mineral resource of 16,050,000 tonnes grading 4.04% zinc and 1.08% lead. The company also calculated an initial inferred mineral resource for the Anniv West extension deposit of 6,880,000 tonnes grading 4.30% zinc and 1.25% lead. The company did not calculate an underground mineral resource for the Anniv East deposit. This is likely due to the depth of the mineralization, its thinner width and its distance from other potential underground deposits.

An updated resource estimate dated March 14, 2008 (by Pearson and O'Donnell) updated the INFERRED resource for the ANNIV West deposit to 6.88M tonnes grading 4.3% Zn and 1.25% Pb. The 2007 estimates for the Anniv WEST and ANNIV Central remained unchanged.

Pacifica/Selwyn Resources concentrated the 2007, 2008 and 2009 exploration programs on other areas of the Howard's Pass property. Metallurgical and engineering studies of the Anniv deposits and other areas continued during this time with the aim of identifying deposits which could be rapidly developed if the eventual feasibility study returned a positive production decision. Selwyn Resources published an update mineral resource estimate for the Howard's Pass property in Jan/2009 but the resource figure for the Anniv deposits did not change.

In Apr/09 Selwyn Resources published descriptions of the Anniv Central, Anniv East, and Anniv West deposits. The Anniv Central deposit has a defined strike length of 2.7 km, strikes 286° and dips 80° on the eastern edge, flattening to approximately 30° and dipping 50° on the west edge due to folding. The deposit is considered closed to the west but is open down dip and to the east. Sixty-nine drill holes define the resource associated with the deposit.

The Anniv East deposit has a length is 2.6 km and is interpreted to be an antiform striking at 110 to 290° with dips changing from 23° to the south, to 0° at the hinge of the antiform and a steeper 50° dip to the north. Low angle thrusts are interpreted as breaking the deposit into three separate lenses. The mineralization is confined to the east but unconstrained to the west and the south down dip direction. The interpretation for the deposit is that the steeper, northern limb of the antiform has been dragged into a large fault trending 295 to 300°.

The Anniv West is steeply orientated 70 to 120° and dips 80 to 85° and is cut by 100 /85° orientated structures which separate the deposit into 5 separate lenses. The mineralization is considered closed to both the east and west, but is open down dip. Due to structural complexities, Selwyn Resources personnel had difficulties correlating the Anniv West extension, thus they classified it an inferred resource. Of the nineteen drill holes collared in 2006, fourteen intersected the mineralized Active Member.

As of Sep/2010 the entire Howard's Pass property (consisting of 15 individual deposits) hosts an indicated resource (using a 2% zinc cut-off) of 154,350,000 tonnes grading 5.35% zinc and 1.86% lead and an inferred resource of 234,150,000 tonnes grading 4.54% zinc and 1.41% lead.

A September 2012 report by Kirkham Geosystems lists a global resource for the Selwyn Project, which includes the 2007-08 estimates for the Anniv deposits. At a 2% Zn cut-off grade, the Global INDICATED Mineral Resource for the Selwyn Project is calculated at 185,570,000 tonnes grading 5.2% Zn and 1.79% Pb for a contained total of 21.26B lbs(9.64B kg) Zn and 7.3Blbs (3.3B kg) Pb. The Global INFERRED resource is listed at 237,860,000 tonnes grading 4.47% Zn and 1.38% Pb for a contained total of 23.45B lbs (10.63B kg) Zn and 7.22Blbs (3.27B kg) Pb.

Work History

Date	Work Type	Comment
9/27/2012	Studies	Kirkham Geosystems, Sept 27 2012 for Global Selwyn Resource.
4/30/2007	Studies	Pearson and O'Donnell, April 2007. Current estimate for Anniv Central and East as March 2014 . Anniv West recalculated in 2008.
3/14/2008	Studies	Pearson and O'Donnell, March 2008. Current estimate for Anniv West as of March 2014.
12/31/2010	Studies	Began feasability study for entire property.
12/31/2006	Drilling	89 holes, 58408.1 m
12/31/2006	Other	Based on historic and 2005 drilling results. Calculated for Anniv Central and East deposits.
12/31/2005	Drilling	22 holes, 7776.9 m
12/31/2005	Lab Work/Physical Studies	Dense media separation carried out on rock and drill core samples.
12/31/2000	Drilling	5 holes
12/31/2000	Lab Work/Physical Studies	Preliminary metallurgical studies carried out to study dense media separation method.
12/31/1983	Other	Company published resource estimate. Not NI 43-101 compliant.
12/31/1982	Studies	Economic analysis completed, project judged uneconomic at that time.
12/31/1979	Drilling	10 holes, 3650.6 m
12/31/1978	Drilling	20 holes, 5455.9 m
12/31/1976	Drilling	30 holes, 3048 m
12/31/1975	Drilling	4 holes, 304.8 m
12/31/1974	Trenching	
12/31/1973	Geology	
12/31/1973	Geochemistry	
12/31/1972	Geochemistry	

Assessment Reports that overlap occurrence

Report Number	Year	Title	Worktypes	Holes Drilled	Meters Drilled
<u>095096</u>	2008	Assessment Report Describing Prospecting, Geochemical Sampling and Diamond Drilling on the Selwyn Project	Diamond - Drilling, Drill Core - Geochemistry, Soil - Geochemistry, Prospecting - Other	13	3856.90
004637	2006	Assessment Report Describing Prospecting, Geochemical Sampling	Diamond - Drilling, Rock - Geochemistry, Soil - Geochemistry,	150	30004 70

051037	2000	and Diamond Drilling on the Selwyn Project	Bedrock Mapping - Geology, Regional Surficial Mapping - Geology	100	JUJJT./U
<u>094657</u>	2005	Assessment Report Describing Prospecting, Geochemical Sampling and Diamond Drilling on the Selwyn Project Property	Diamond - Drilling, Rock - Geochemistry, Silt - Geochemistry, Soil - Geochemistry, Bedrock Mapping - Geology, Regional Surficial Mapping - Geology	53	8285.72
<u>097005</u>	1976	Final Report on the 1976 Exploration Program at Howards Pass, Yukon	Access Road - Development, Surface, Diamond - Drilling, Soil - Geochemistry, Bedrock Mapping - Geology, EM - Ground Geophysics, Gravity Survey - Ground Geophysics, Surveying - Other, Mechanical - Trenching	70	9501.23
<u>091190</u>	1976	[Diamond Drilling at Howard Pass Property]	Diamond - Drilling		
<u>097007</u>	1975	Final Report on the 1975 Exploration Program at Howards Pass, Yukon	Air Strip - Development, Surface, Diamond - Drilling, Soil - Geochemistry, Bedrock Mapping - Geology, Prospecting - Other, Mechanical - Trenching	19	4013.45
<u>061275</u>	1973	Report on the Geology and Mineralization Summit Lake Area, Y.T N.W.T.	Silt - Geochemistry, Soil - Geochemistry, Regional Bedrock Mapping - Geology		

Related References

Number	Title		Reference Type	Document Type		
ARMC009055	Geological map - 105H-9 - MacMillan project - Anmac		Property File Collection	Geoscience Map (Geological - Bedrock)		

Resource/Reserve

Year	Zone	Туре	Commodity	Grade	Tonnage	Amount	Reported A mount	43-101 Compliant	Cut-off	
2012	Selwyn Global Resource (Open Pit & Underground)	Indicated	lead	1.79 %	185,570,000	3311224301	Yes	Yes	2% Zn	
Kirkha	Kirkham Geosystems, Sept 27 2012.									
2012	Selwyn Global Resource (Open Pit & Underground)	Indicated	zinc	5.2 %	185,570,000	9643373786	Yes	Yes	2% Zn	
Kirkha	Kirkham Geosystems, Sept 27 2012.									
2012	Selwyn Global Resource (Open Pit & Underground)	Inferred	zinc	4.47 %	237,860,000	10636741076	Yes	Yes	2% Zn	
Kirkha	n Geosystems, Sept 27 2012.									
2012	Selwyn Global Resource (Open Pit & Underground)	Inferred	lead	1.38 %	237,860,000	3274936911	Yes	Yes	2% Zn	
Kirkha	n Geosystems, Sept 27 2012.									
2008	Anniv West (Open Pit)	Inferred	zinc	4.3 %	6,880,000	294835040	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, March 2008.									
2008	Anniv West (Open Pit)	Inferred	lead	1.25 %	6,880,000	86182550	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, March 2008.									
2007	ANNIV EAST (OPEN PIT)	Indicated	lead	1.2 %	16,920,000	204116566	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, April 2007.									
2007	ANNIV EAST (OPEN PIT)	Inferred	zinc	4.04 %	16,050,000	648637089	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, April 2007.									
2007	ANNIV EAST (OPEN PIT)	Indicated	zinc	4.15 %	16,920,000	703068173	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, April 2007.									
2007	ANNIV WEST EXTENSION (OPEN PIT)	Inferred	lead	1.25 %	6,880,000		No	Yes	Unknown	
This is Placer' zinc cu	an initial National Instrument 43-101 compliant Mineral Resource Estimate fo s drill hole ANC – 056.; Pacifica Resources Ltd Press Release, Apr 2, 2007. J. t-off grade. Also available on SEDAR.	r Anniv West extension. J. O'Donnell was onsite	Calculated usin Qualified Person	ig historic, n, Cliff Pea	2005 and 2006 d rson of Pearson	Irilling. Deposit Geological Ltd	defined as al , Independer	drill holes loca It Qualified Per	ated west of rson. Uses 2%	
2007	ANNIV EAST (OPEN PIT)	Inferred	lead	1.08 %	16,050,000	172365100	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, April 2007.									
2007	ANNIV CENTRAL (OPEN PIT)	Inferred	lead	1.48 %	40,120,000	594206004	No	Yes	2% Zn	
Pearso	n and O'Donnell, April 2007.									
2007	ANNIV CENTRAL (OPEN PIT)	Indicated	lead	1.51 %	17,980,000	272155422	Yes	Yes	2% Zn	
Pearson and O'Donnell, April 2007.										
2007	ANNIV WEST EXTENSION (OPEN PIT)	Inferred	zinc	4.3 %	6,880,000		No	Yes	Unknown	
This is an initial National Instrument 43-101 compliant Mineral Resource Estimate for Anniv West extension. Calculated using historic, 2005 and 2006 drilling. Deposit defined as all drill holes located west of Placer's drill hole ANC – 056.; Pacifica Resources Ltd Press Release, Apr 2, 2007. J. J. O'Donnell was onsite Qualified Person, Cliff Pearson of Pearson Geological Ltd, Independent Qualified Person. Uses 2% zinc cut-off grade. Also available on SEDAR.										
2007	ANNIV CENTRAL (OPEN PIT)	Inferred	zinc	4.63 %	40,120,000	1855192793	Yes	Yes	2% Zn	
Pearso	n and O'Donnell, April 2007.									
2007	ANNIV CENTRAL (OPEN PIT)	Indicated	zinc	4.52 %	17,980,000	811930342	Yes	Yes	2% Zn	
Pearso	n and O'Donnell. April 2007.									

2006	ANNIV CENTRAL (OPEN PIT)	Inferred	lead	1.79 %	20,970,000	No	Unknown	Unknown		
This is the first National Instrument 43-101 compliant Mineral Resource Estimate using recent drilling results. Based on historic and 2005 drilling results.; Pacifica Resources Ltd Press Release, Feb 9, 2006. J. J. O'Donnell was onsite Qualified Person, J. Nilsson of Nilsson Mine Services Independent Qualified Person. Uses 2% zinc cut-off grade. Also available on SEDAR.										
2006	ANNIV CENTRAL (OPEN PIT)	Indicated	lead	1.66 %	12,590,000	No	Unknown	Unknown		
This is t O'Donr	This is the first National Instrument 43-101 compliant Mineral Resource Estimate using recent drilling results. Based on historic and 2005 drilling results.; Pacifica Resources Ltd Press Release, Feb 9, 2006. J. J. O'Donnell was onsite Qualified Person, J. Nilsson of Nilsson Mine Services Independent Qualified Person. Uses 2% zinc cut-off grade. Also available on SEDAR.									
2006	ANNIV EAST (OPEN PIT)	Inferred	lead	1.28 %	18,380,000	No	Unknown	Unknown		
This is t O'Donr	he first National Instrument 43-101 compliant Mineral Resource Estimate us nell was onsite Qualified Person, J. Nilsson of Nilsson Mine Services Indeper	ing recent drilling results Ident Qualified Person. l	. Based on histo Jses 2% zinc cu	oric and 20 t-off grade	05 drilling results.; Pacifica Re e. Also available on SEDAR.	sources Ltd Pr	ess Release, Fe	eb 9, 2006. J. J.		
2006	ANNIV CENTRAL (OPEN PIT)	Inferred	zinc	5.38 %	20,970,000	No	Unknown	Unknown		
This is t O'Donr	he first National Instrument 43-101 compliant Mineral Resource Estimate us nell was onsite Qualified Person, J. Nilsson of Nilsson Mine Services Indeper	ing recent drilling results Ident Qualified Person. I	. Based on histo Jses 2% zinc cu	oric and 20 t-off grade	05 drilling results.; Pacifica Re e. Also available on SEDAR.	sources Ltd Pr	ess Release, Fe	eb 9, 2006. J. J.		
2006	ANNIV CENTRAL (OPEN PIT)	Indicated	zinc	4.91 %	12,590,000	No	Unknown	Unknown		
This is t O'Donr	he first National Instrument 43-101 compliant Mineral Resource Estimate us nell was onsite Qualified Person, J. Nilsson of Nilsson Mine Services Indeper	ing recent drilling results Ident Qualified Person. l	. Based on histo Jses 2% zinc cu	oric and 20 t-off grade	05 drilling results.; Pacifica Re e. Also available on SEDAR.	sources Ltd Pr	ess Release, Fe	eb 9, 2006. J. J.		
2006	ANNIV EAST (OPEN PIT)	Inferred	zinc	4.46 %	18,380,000	No	Unknown	Unknown		
This is t O'Donr	he first National Instrument 43-101 compliant Mineral Resource Estimate us nell was onsite Qualified Person, J. Nilsson of Nilsson Mine Services Indeper	ing recent drilling results Ident Qualified Person. U	. Based on histo Jses 2% zinc cu	oric and 20 t-off grade	05 drilling results.; Pacifica Re e. Also available on SEDAR.	sources Ltd Pr	ess Release, Fe	eb 9, 2006. J. J.		
1983	ANNIV EAST (OPEN PIT)	Historical Estimate	lead	1.74 %	33,156,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mo	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation zinc cut-off.	n Report for Pa	acifica		
1983	ANNIV CENTRAL (OPEN PIT)	Historical Estimate	lead	1.83 %	22,245,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mo	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation zinc cut-off.	n Report for Pa	acifica		
1983	ANNIV - TOTAL RESERVES (OPEN PIT & UNDERGROUND)	Historical Estimate	lead	2.1 %	61,000,000	No	No	Unknown		
Placer I Mines a	Development defined these figures as drill indicated reserves. Does not mee nd Mineral Activities 1982, p. 35. Also Canadian Mineral Deposits Not Being	t National Instrument 43 Mined in 1986 - Mineral	-101 standards. Bulletin MR 213	Tonnage , p. 313. O	and grade are approximate. A riginal figures came from Plac	lso hosts a sul er Developme	bstantial inferre nt Ltd.	ed resource.;		
1983	ANNIV EAST (OPEN PIT)	Historical Estimate	zinc	5.37 %	141,278,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mo	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation zinc cut-off.	n Report for Pa	acifica		
1983	ANNIV EAST (OPEN PIT)	Historical Estimate	zinc	5.32 %	33,156,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mor	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation zinc cut-off.	n Report for Pa	acifica		
1983	ANNIV CENTRAL (OPEN PIT)	Historical Estimate	zinc	5.07 %	118,698,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mo	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation zinc cut-off.	n Report for Pa	acifica		
1983	ANNIV CENTRAL (OPEN PIT)	Historical Estimate	zinc	5.25 %	22,245,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mor	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation b zinc cut-off.	n Report for Pa	acifica		
1983	ANNIV - TOTAL RESERVES (OPEN PIT & UNDERGROUND)	Historical Estimate	zinc	5.4 %	61,000,000	No	No	Unknown		
Placer I Mines a	Development defined these figures as drill indicated reserves. Does not mee nd Mineral Activities 1982, p. 35. Also Canadian Mineral Deposits Not Being	t National Instrument 43 Mined in 1986 - Mineral	-101 standards. Bulletin MR 213	Tonnage , p. 313. O	and grade are approximate. A riginal figures came from Plac	lso hosts a sul er Developme	bstantial inferre nt Ltd.	ed resource.;		
1983	ANNIV EAST (OPEN PIT)	Historical Estimate	lead	1.73 %	141,278,000	No	No	Unknown		
Althoug Resour	gh these figures use Indicated and Inferred mineral resources they should ces Ltd on Howard's Pass Property. June 6, 2005. By A.A. Burgoyne. Avail	be considered historical able on Sedar. Provides	only. Not Nation reserve figures	nal Instrur using Mo	nent 43-101 compliant.; Techr rganti's 1983 figures. Using 4%	ical Evaluation	n Report for Pa	acifica		
1983	ANNIV CENTRAL (OPEN PIT)	Historical Estimate	lead	1.73 %	118,698,000	No	No	Unknown		
Althoug	gh these figures use Indicated and Inferred mineral resources they should	be considered historical able on Sedar, Provides	only. Not Nation	nal Instrur using Mo	nent 43-101 compliant.; Techr rganti's 1983 figures, Using 4%	ical Evaluation	n Report for Pa	acifica		