

New Discovery of Disseminated Copper-Silver Mineralization at the Bolivar Mine, Chihuahua, Mexico

Eugene K. Schmidt
Vice-President Exploration and Geology

Dia Bras Exploration Inc.

March 25, 2009

Summary

Exploration teams of Dia Bras Exploration Inc. wholly owned Mexican subsidiary, Dia Bras Mexicana S.A. de C.V. encountered six areas of disseminated copper-silver skarn mineralization during ongoing geologic studies, mapping, sampling, and drilling at its Bolivar mine, Chihuahua, Mexico. Copper-silver mineralization crops out in skarnitized carbonate rocks at their contact with the Piedras Verdes granodiorite stock and extends for two kilometers from Bolivar Northwest at the north end of the Bolivar District to El Gallo at the current southern limit of district exploration (See [Figure 1](#)).

Among these six occurrences the San Francisco Sur area is a new discovery, however some of the other areas have been known since Dia Bras first began working at the Bolivar mine. Disseminated copper silver mineralization of this type was first recognized in 2004 at Bolivar Northwest.

The northernmost areas, Bolivar Northwest and Rosario are defined as small Measured and Indicated resources of 146,300 tons of 0.61% Cu, 1.44% Zn, 0.24 gm Au/mt and 16.8 gm Ag/ mt (0.5 % CuEq Cutoff) and 17,200 mt 0.66% Cu, 6.18% Zn, 0.1 gm Au/ mt, and 17.1 gm Ag/ mt (2.5 % CuEq Cutoff) respectively (see Yann Camus, Eng. SGS Geostat, Technical Report, Resources Update, February 2009, Bolivar Project, Chihuahua Province, Mexico, dated February 6, 2009). However these resources may represent the current limit of exploration rather than the limit of mineralization (See [Figure 2](#) and [Figure 3](#)).

Areas	Unit	Cu Eq Cut-off grade	Resource Categories	SG (tm3)	Tonnes	Cu %	Zn %	Au gm/mt	Ag gm/mt
Bolivar NW	Lower Skarn	0.50	Measured	3.27	74,000	0.55	1.62	0.20	16.0
Bolivar NW	Lower Skarn	0.50	Indicated	3.27	72,300	0.67	1.26	0.28	17.6
Bolivar NW	Lower Skarn	0.50	Measured & Indicated	3.27	146,300	0.61	1.44	0.24	16.8
Rosario	Upper Skarn	2.5	Measured	3.52	7,900	0.57	5.63	0.09	12.7
Rosario	Upper Skarn	2.5	Indicated	3.52	9,300	0.73	6.64	0.06	20.8
Rosario	Upper Skarn	2.5	Measured & Indicated	3.52	17,200	0.66	6.18	0.07	17.1

Three hundred meters south of Bolivar Northwest, the Bismarck stope in the Bolivar mine is within 40 meters of the surface and produced approximately 5000 mt of 0.68% Cu, 0.17% Zn, 0.5 gm Au/ mt, 32.0 gm Ag/ mt. Drilling of Hole DB06BM053 encountered an additional 62.1 meters from 19.2 m to 81.3 m 0.87% Cu, 0.84% Zn, 0.05 gm Au/mt and 22.5 gm Ag/ mt 60 meters east of the stope. Mineralization in the Bismarck stope is open on plans and sections in all directions away from Bismarck (See [Figure 4](#) and [Figure 5](#)).

Two additional areas, Brecha Linda Surface and San Francisco Surface show strongly anomalous results from more than 500 surface samples and produced significant drill intercepts in subsequent discovery drilling. One hundred samples collected at Brecha Linda from skarn altered outcrops averaged 0.3% Cu, 0.7% Zn, 0.1 gm Au/ mt, and 14 gm Ag/mt. Core hole DB09B281 drilled in these outcrops encountered a length along hole of 5.4 meters from 6.6 m to 12.0 m of 14.85 % Cu, 14.4 % Zn, 0.62 gm Au/mt, and 330 gm Ag/mt. (See [Figure 6](#) and [Figure 7](#)).

Sample Summary Results

Area	Number Samples	Sample type	Data type	Cu %	Zn %	Au gm/ mt	Ag gm/ mt	Reference
Bolivar Northwest	114	2x2 & 3x3 Panel	Average	0.6	2.8	0.34	51	Table 2
Brecha Linda	100	2x2 Panel	Average	0.3	0.7	0.1	14	Table 3
San Francisco Sur Upper Skarn	222	2x2 Panel	Average	1.25	2.53	1.3	46	Table 4
San Francisco Sur Lower Skarn	88	2x2 Panel	Average	0.8	0.0	0.7	32	Table 5

At San Francisco Sur 222 rock chip samples of outcropping upper skarn averaged 1.25% Cu, 2.53% Zn, 1.3 gm Au/mt, 46 gm Ag/mt. Drill holes DB09B277 and DB09B278 drilled to test the skarn mineralization 10 meters down dip from surface outcrops encountered 13.0 meters (Hole DB09B277 from 29.0m to 42.0m) of 0.71% Cu, 1.73% Zn, 0.3 gm Au/ m.t., and 56 gm Ag/ m.t. and 10.3 meters (Hole DB09B278 from 23.0m to 33.3m) of 0.45% Cu, 1.85% Zn, 0.5 gm Au/ m.t., and 55 gm Ag/ m.t. respectively (Lengths along Holes).

The southernmost of these mineralized areas, the El Gallo Upper Skarn, crops out on surface for approximately 400 meters. Here during the 2007 and 2008 drill program 20 holes penetrated disseminated and massive bornite, chalcopyrite, and sphalerite in andradite-grossularite skarn and so far have defined a small resource of 7,600 tonnes measured and Indicated of 0.62 % copper, 8.23 % zinc, 0.14 gm Au/ m.t., 9.4 gm Ag/ m.t. and 35,200 tonnes inferred of 0.98 % copper, 10.69 % zinc, 0.10 gm Au/ m.t., 13.0 gm Ag/ m.t. (see details in table below and Yann Camus, Eng. SGS Geostat, Technical Report, Resources Update, February 2009, Bolivar Project, Chihuahua Province, Mexico, dated February 6, 2009).

Areas	Unit	Cu Eq Cut-off grade	Resource Categories	SG (tm3)	Tonnes	Cu %	Zn %	Au gm/mt	Ag gm/mt
El Gallo	Upper Skarn	2.50	Measured	3.52	1,500	0.55	4.56	0.20	9.3
El Gallo	Upper Skarn	2.50	Indicated	3.52	6,100	0.63	9.13	0.12	9.5
El Gallo	Upper Skarn	2.50	Measured & Indicated	3.52	7,600	0.62	8.23	0.14	9.4

The significance of these areas is not the small resources currently defined but the potential that exists between them. The intervening ground hosts a number of low grade, copper-silver mineralized showings that are exposed on surface, in shallow surface workings, and in drill holes. Together these suggest that copper-silver mineralization continues for over two kilometers along strike of the garnet skarn with the potential for an open-pittable copper-silver resource. Initial exploration is planned to sample and drill both the known resources and intervening ground to explore this target concept.

Currently Dia Bras operates the Bolivar underground pilot mining operation from two surface adits at the Bolivar Mine. Mining is advancing in skarn down-dip to the east, exploiting massive copper-zinc skarn mineralization that when diluted produced a total of 126,489 tonnes of material from the Bolivar Mine at an average grade of 1.65% Cu and 8% Zn in 2008. However, it is the disseminated mineralization described in this release that presents potential for a low-cost, open-pit mining operation to feed Dia Bras' proposed new on-site mill.

Bolivar Northwest

Located 320 meters northwest and 130meters west of the Bolivar Mine Portal 1 (See [Figure 2](#)) two sprays of nine and two drill holes respectively define a measured and indicated resource of 146,300 tons of 0.61% Cu, 1.44% Zn, 0.24 g Au/t and 16.8 gm Ag/ mt on surface (at a 0.5% CuEq Cutoff) (see Yann Camus, Eng. SGS Geostat, Technical Report, Resources Update, February 2009, Bolivar Project, Chihuahua Province, Mexico, dated February 6, 2009). North south trending mineralization crops out 20-50 meters wide, 60-80 meters thick and is open to the north and south along strike of the garnet pyroxene skarnitized carbonate sequence.

Areas	Unit	Cu Eq Cut-off grade	Resource Categories	SG (tm3)	Tonnes	Cu %	Zn %	Au gm/mt	Ag gm/mt
Bolivar NW	Lower Skarn	0.50	Measured	3.27	74,000	0.55	0.35	0.35	16.0
Bolivar NW	Lower Skarn	0.50	Indicated	3.27	72,300	0.67	1.62	0.20	17.6
Bolivar NW	Lower Skarn	0.50	Measured & Indicated	3.27	146,300	0.61	1.44	0.24	16.8

[Figure 3](#) and [Table 2](#) show surface sampling results from 114 samples collected from Bolivar Northwest surface outcrops. The following table is a summary of these and other sampling results from all areas sampled and referred to in this report.

Sample Summary Results

Area	Number Samples	Sample type	Data type	%Cu	%Zn	Au gm/ mt	Ag gm/ mt	Reference
Bolivar Northwest	114	2x2 & 3x3 Panel	Average	0.6	2.8	0.34	51	Table 2
Brecha Linda	100	2x2 Panel	Average	0.3	0.7	0.1	14	Table 3
San Francisco Sur Upper Skarn	222	2x2 Panel	Average	1.25	2.53	1.3	46	Table 4
San Francisco Sur Lower Skarn	88	2x2 Panel	Average	0.8	0.0	0.7	32	Table 5

The furthest hole north DB04B026 advanced 277 meters northwest inclined 62° north from Bolivar Northwest beneath hornfelthized andesite and encountered disseminated and veinlet controlled chalcopryrite-pyrite in mixed dark garnet skarn and light green pyroxene hornfels. The hole encountered the following mineralization that suggests disseminated copper-silver mineralization continues further to the north under hornfelthized andesite (See [Table 1](#) and [Figure 1](#)).

Drill Hole	From:	To:	Along Hole Length (m)	% Cu	% Zn	Au gm/mt	Ag gm/mt
DB04B026	18	33	13.24	1.76	2.34	0.47	18.37
	38	39	0.88	0.89	0.01	1.49	16.30
	66	67	0.88	1.23	0.01	1.90	7.30
	99	101	1.77	1.54	0.02	1.42	14.20
	109	116	6.18	1.79	0.00	1.63	36.27
	163	165	1.77	1.07	0.01	0.64	2.55
	210	213	2.65	1.71	0.01	3.13	30.50
	218	224	5.30	1.16	0.03	1.49	18.58
	255	257	1.77	1.47	0.04	3.06	36.75

Bismarck Stope

South of Bolivar Northwest 210 meters and 60 meters inside the Level 6 portal of the Bolivar mine a second area of disseminated mineralization was mined underground by Dia Bras in the Bismarck stope (See [Figure 4](#) and [Figure 5](#)). Alteration consists of brown garnet skarn alteration of limestone which is zoned from green garnet and soft green pyroxene-wollastonite near the westernmost marble contact to green garnet, bladed vesuvianite and massive chalcopryrite-sphalerite that define the eastern marble contact. Sulfide mineralization consists of massive sphalerite that follows a fault and andesite dike, a 10 meter wide zone of massive chalcopryrite and brown garnet pods, and coarse disseminated chalcopryrite in massive calcite.

Overall the Bismarck stope produced 5000 tons of 0.68% Cu, 0.17% Zn 0.5 gm Au/mt and 32.0 gm Ag/mt, grades that were uneconomic to mine underground and ship to the Malpaso mill. However Bismarck mineralization is less than 40 meters below surface suggesting it has open pit potential.

Drill holes DBM06BM051 and DBM06BM053 located 60 meters east of the Bismarck stope show that copper mineralization and garnet skarn continue to the east. Drilling of Hole DB06BM053 encountered an additional 62.1 meters from 19.2 m to 81.3 m 0.87% Cu, 0.84% Zn, 0.05 gm Au/mt and 22.5 gm Ag/ mt 60 meters east of the stope. Sections through the Bismarck stope are open and mineralization continues in all directions. (See [Figure 4](#) and [Figure 5](#)).

Brecha Linda Surface

Surface mapping and sampling at the outcrop of the Brecha Linda mineralized body encountered disseminated, fracture controlled and massive chalcopryrite and sphalerite in andradite grossularite skarn intercalated with sericite hornfels and, along the skarn contact with granodiorite, epidote and actinolite alteration ([Figure 6](#) and [Figure 7](#)).

One hundred samples collected on the altered outcrops yielded 0.3% Cu, 0.7% Zn, 0.1 gm Au/ mt, and 14 gm Ag/mt. Three shallow drill holes explored the Brecha Linda outcrops down dip and encountered the following mineralization.

Drill Hole	Workplace	From	To	Along Hole Length	% Cu	% Zn	Au gm/mt	Ag gm/mt
DB09BM281	Brecha Linda	6.60	12.00	5.40	14.85	14.40	0.62	329.76.
		24.00	25.00	1.00	2.16	5.32	0.04	33.00
DB09BM282	Brecha Linda	25.80	26.45	0.65	0.45	2.30	0.01	4.30
DB09BM283	Brecha Linda	18.90	24.90	6.00	0.59	2.89	0.03	8.38

San Francisco Sur Surface Outcrops

Eight hundred meters south-southwest of Bolivar NW, massive and disseminated chalcopyrite-bornite mineralization of the upper skarn crops out in garnet and pyroxene skarn ([Figure 1](#) and [Figure 10](#)). Mineralization extends east-southeast from the Pozo de Agua fault along the trace of host skarnitized carbonate and defines the southwest edge of the El Gallo area.

Here, copper-silver mineralization of the Upper Skarn is found in gray green, yellow, and dark brown interbedded garnet, epidote skarn, sericite hornfels in thinly interstratified marble. Chalcopyrite, bornite, sphalerite, and hematite-magnetite occur as disseminated grains, veinlets, veins, and irregular blotches. Veining is generally northwest cutting a lessor northeast direction.

At San Francisco Sur, an area 30 meters wide and 180 meters long was first sampled as 3 x 3 meter panels of chip channel samples and assayed using the Dia Bras Malpaso Mill Laboratory. Assays showed 219 samples averaging 1.44% Cu, 6.79% Zn, 0.68 gm Au/mt, 45 gm Ag/mt and 11.76% Fe (See [Figure 8](#)). The area was re-sampled with 222 samples collected as 3 x 3 meter panels of chip samples perpendicular and along the strike of bedding, skarn alteration, and disseminated zones. The samples were assayed using ALS Chemex and showed 222 samples averaging 1.25% Cu, 2.5 % Zn, 1.3 gm Au/mt, 46 gm Ag/mt, and 10.4% Fe (see [Table 4](#)).

Drill Holes DB09B277 and DB09B278 were drilled as shallow holes to test the skarn mineralization at a depth of meters down dip from surface outcrops ([Figure 9](#)). They encountered the following mineralization:

Drill Hole	Work Place	From	To	Length Along Hole	Cu %	Zn%	Au gm/mt	Ag gm/mt
DB09B277	San Francisco Sur	29.0	42.0	13.0	0.71	1.73	0.33	56.2
DB09B278	San Francisco Sur	23.0	33.3	10.3	0.45	1.85	0.53	55.3

Seventy-five meters down section, a 30 meter wide by 80 meter long outcrop of Lower skarn is centered on Mina de Fierro. Chalcopyrite and magnetite mineralization is defined by interbedded grossularite-andradite skarn, sericite, phlogopite, and amorphous silica and follows fractures, faults, and bedding planes as veinlets and mantos less than 0.1 meters thick. One line of chip channels and systematic rock chip samples was collected over the outcrop along an unnamed arroyo perpendicular to the strike of bedding. Mineralization consists of 88 samples that average 0.8% Cu, 0.0% Zn, 0.7 gm Au/mt, 32 gm Ag/mt and 25.7% Fe (see [Table 5](#) and [Figure 8](#)).

El Gallo Upper Skarn

At the southern end of the Bolivar District, the Upper Skarn crops out for 400 meters along strike with garnet hornfelthized carbonate host rocks. In the 2007 and 2008 drilling program, approximately 20 holes penetrated andradite-grossularite garnet, hematite, epidote chlorite, and calcite altered carbonate and hornfelthized andesite.

Of interest among these holes is Drill Hole DB07BD225. The hole intersected copper-silver mineralization that exhibits a form similar to the chimneys mined on the west end of Brecha Linda and that has been recently discovered at Guadalupe. Drill Hole DB07BD225 encountered a 120 meter core length of massive sulfide mineralization, in which a number of copper bearing intersections were penetrated, including a 73.8 meter section core length (69.4 meter estimated true width) that averaged 1.2% Cu, 0.1 gm Au/ mt and 41 gm Ag/ mt. Originally this mineralization was thought to be the Lower Skarn Manto, however relogging of Drill Hole DB07BD225, its geochemistry, and mining experience in Brecha Linda and Guadalupe suggest it represents a chimney structure and possible source for the upper skarn copper silver body.

The southernmost of these mineralized areas, the El Gallo Upper Skarn, crops out on surface for approximately 400 meters. Here during the 2007 and 2008 drill program 20 holes penetrated disseminated and massive bornite, chalcopyrite, and sphalerite in andradite-grossularite skarn and so far have defined a small resource of 7,600 tonnes measured and Indicated of 0.62 % copper, 8.23 % zinc, 0.14 gm Au/ m.t., 9.4 gm Ag/ m.t. and 35,200 tonnes inferred of 0.98 % copper, 10.69 % zinc, 0.10 gm Au/ m.t., 13.0 gm Ag/ m.t. (see details in table below and Yann Camus, Eng. SGS Geostat, Technical Report, Resources Update, February 2009, Bolivar Project, Chihuahua Province, Mexico, dated February 6, 2009).

Areas	Unit	Cu Eq Cut-off grade	Resource Categories	SG (tm3)	Tonnes	Cu %	Zn %	Au gm/mt	Ag gm/mt
El Gallo	Upper Skarn	2.50	Measured	3.52	1,500	0.55	4.56	0.20	9.3
El Gallo	Upper Skarn	2.50	Indicated	3.52	6,100	0.63	9.13	0.12	9.5
El Gallo	Upper Skarn	2.50	Measured & Indicated	3.52	7,600	0.62	8.23	0.14	9.4

Planned Exploration

To explore this copper silver mineralization, continued surface sampling is planned in 2009 as lines of chip channel samples cross-cutting the garnet hornfels skarn perpendicular to its strike and between the six areas of known skarn-hosted mineralization. New mineralization discovered by this sampling will be offset by shallow discovery core holes drilled perpendicular to the dip of skarnitized beds. Areas of interest so defined will receive reconnaissance drilling to outline the extent of mineralization and plan future definition and development drilling.

The identification of Bolivar as a copper skarn system by Prof. Larry Meinert (2004) with high zinc in distal regions, as opposed to a zinc skarn system, has several implications for exploration and development. The most positive aspect is that copper skarns can be much larger than zinc skarn systems with many known examples greater than 100 Mt. Copper skarns commonly associated with porphyry intrusions can be even larger, with several known examples such as Bingham, Utah, Morenci, Arizona, and Santa Rita, New Mexico in the 500 Mt to + One Bt range (Meinert, 2004). Copper and copper-zinc skarns in this size range crop out at Santo Tomas and Bauhuerachi located within 40 kilometers south southwest of Bolivar.

It is hoped that Bolivar NW copper silver mineralization represents the first step toward the discovery of a copper porphyry skarn as well as low cost open pitable mill feed for Dia Bras' new on site mill.

FIGURES

To view **Figure 1** Location Map - Disseminated Copper-Silver Mineralization at the Bolivar Mine, Chihuahua, Mexico: http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure1_DisseminationCuAg.pdf

To view **Figure 2** Location Map – Bolivar NW Disseminated Copper-Silver Mineralization Chihuahua, Mexico: http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure2_BolivarNWDissemination_Cu-Ag.pdf

To view **Figure 3** Location Map – Bolivar NW Sampling http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure3_BolivarNW_Open_pit.pdf

To view **Figure 4**– Bismarck Stope http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure4_Bismarck_Stope.pdf

To view **Figure 5**– Bismarck 9975N Section http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure5_Section9975_Bismarck.pdf

To view **Figure 6**– Brecha Linda Surface Sampling http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure6_BXL_Openpit.pdf

To view **Figure 7**– DB09B281, 282, 283 Section / Brecha Linda http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure7_SecN60E_009825_00_281_282_283.pdf

To view **Figure 8**– San Francisco Sur – Surface Sampling http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure8_San_Francisco_Open_pit.pdf

To view **Figure 9**– DB09277 & DB09278 – San Francisco Sur http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure9_Sec_N60E_009525_00_277_278.pdf

To view **Figure 10**– El Gallo Upper and Lower Skarn Areas http://www.diabras.com/en/newscenter/2009/DIBPr15_Figure10_El_Gallo_Upper_and_Lower_Skarn.pdf

TABLES

To view the Bolivar Northwest Resource Drill Hole Intercepts: http://www.diabras.com/en/newscenter/2009/DIBPr15_Table1.pdf

To view the complete assays results for the Bolivar Northwest area, please visit the link below: http://www.diabras.com/en/newscenter/2009/DIBPr15_Table2.pdf

To view the complete assays results for the Brecha Linda area, please visit the link below: http://www.diabras.com/en/newscenter/2009/DIBPr15_Table3.pdf

To view the complete assays results for the San Francisco Sur area / Upper Skarn, please visit the link below: http://www.diabras.com/en/newscenter/2009/DIBPr15_Table4.pdf

To view the complete assays results for the San Francisco Sur area / Lower Skarn, please visit the link below: http://www.diabras.com/en/newscenter/2009/DIBPr15_Table5.pdf