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NEW ORE DISCOVERIES AT MYRA FALLS OPERATIONS, BUTTLE LAKE, VANCOUVER ISLAND, BC

BY:

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PRESENTED TO:

CIM DISTRICT 6 MEETING OCTOBER 1-3, 1992 CAMPBELL RIVER, BRITISH COLUMBIA

INTRODUCTION

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Good afternoon, Ladies and Gentlemen. This talk is about a series of recent ore discoveries at our Myra Falls Operations and the general spirit of optimism they have engendered within our Company.

These are difficult times for the mining industry and there is much pessimism about. I hope the ensuing story of exploration success provides a bit of an antidote!

NEW ORE DISCOVERIES AT MYRA FALLS

INTRODUCTION

The Myra Falls Operation of Westmin Resources now comprise the H-W and the Lynx underground producing mines, together with a 3,650 tpd. milling facility. This minesite has seen continuous production for 26 years, initially from the Lynx Open Pit (mined out by 1984) and the Lynx underground mine. In 1972 the Myra Mine, a small high grade polymetallic deposit, came into production and provided very significant revenues over the 13 years it operated. The H-W Mine, the largest producer, was discovered in 1979, came on-stream in 1985 and currently provides 90% of the millfeed. Milling rates ranged from 700 - 1000 tonnes/day until the H-W came into production , jumping at that time to 3,500 tonnes/day. *See Figure 2.

Ore production to date is 13.5 million tonnes from the Lynx, Myra, and H-W Mines combined; grading 2.3 gm/to Au, 63 gm/to Ag, 1.8% Cu, 0.6% Pb, 5.9% Zn. Current Geological reservers are estimated at 12.9 million tonnes grading 2.1 gm/to Au, 43 gm/to Ag, 2.1% Cu, 0.4% Pb, 6.3% Zn. There is also now a very significant potential for additional reserves in the Battle, Gap, Ridge and Extension Zones. *See Figure 3.

This reserve picture has considerably improved over the past two years, due to on-going exploration successes. These new discoveries are the focus of this paper, and represent the tangible results of a serious, time consuming and expensive exploration program - a program which owes much to previous work on the property. As is usually the case, exploration here builds on itself and is constantly evolving - success does not come easily but as a result of management and shareholder commitment along with geology group teamwork.

The specific new ore finds I want to address are:

- 1. New Lynx Mine ore lenses
- 2. "Ridge Zone" Discoveries
- 3. The "Gap" Zone
- 4. The "Battle" Zone
- 5. The H-W "Extension Zone"
- H-W Mine "42 and '43 Block"
- 7. "Trumpeter Zone"

Before looking at specific areas, a brief description of minesite geology is in order. The Myra Falls ore deposits are typical volcanogenic massive sulphides, occurring in the Myra Formation of the Palaeozoic Sicker Group, of Devonian Age. Known occurrences of ore are limited to a 450 meter thick stratigraphic zone called the Mine Sequence - characterized by complex volcanic stratigraphy, including massive volcanics, mixed volcaniclastics and subordinate sediments. Massive sulphides are known to occur within three distinct rhyolite horizons: "G" hanging wall, Lynx-Myra-Price rhyolite and

H-W rhyolite. Structural complexities abound, but in general terms the ore zones trend NW-SE (mine east-west), parallel to the anticline axis. There are a number of orebody types, including polymetallic massive sulphides, polymetallic disseminated sulphides, zoned pyritic massive sulphides, stringer sulphide zones and clastic sulphides. *See Figure 4.

1. <u>New Lynx Mine Ore Lenses</u> 92F 07/

The Lynx Mine has been intensively re-examined and tested, over the past two years, for ore lenses that may have been missed in the first pass of ore definition and mining. This re-evaluation has focused on two targets: areas close to main cross faults, and untested stratigraphy updip and downdip from known lenses. We have had some success with both targets and have reversed a declining ore reserve situation. Some 100,000 tonnes of high grade ore have been discovered in close proximity to the major Lynx-Phillips crossfault, in fault bounded segments of "G" Zone ore. The other target, up and downdip extensions, has yielded some very pleasant surprises, Figures 6 & 7 demonstrate two of these small, structurally complex, but very high grade finds. These orebodies are difficult to hit, but once found can usually be followed for significant strike lengths. They typically are 10,000 - 30,000 tonnes each and can have real economic impact due to their metal content. And, because they occur within the framework of existing mine workings, development costs are comparatively low and access to them is immediate. *See Figures 5, 6, 7.

In addition, some 130,000 tonnes of good grade "S" Zone ore have been discovered along its' Westerly down plunge trend.

Finally, it is worth noting that the Lynx Horizon is completely untested westward one mile to our claim boundary.

2. <u>"Ridge Zone" Discoveries</u>

Full scale exploration for replacement of H-W Mine production began in 1988; testing among other areas the strike projection of the H-W ore horizon below, and to the north of, the Lynx Mine. Dogged pursuit of this target over the next three years resulted in over 50 ore grade sulphide intersections, ranging from 0.2 - 22.5 meters thick. Three mineralized stratigraphic positions were recognized within the H-W horizon here - Hanging wall zone, Upper Zone and Contact Zone. Although this effort was technically successful, distance from existing workings, structural complexities and questionable ore lens continuity tempered the viability of these zones as mineable targets at that time.

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ZONE	TONNES	gm/to Au	gm/to Ag	% Cu	% Pb	% Zn
Ridge Zone West	268,000	3.5	100.5	1.1	1.0	8.0
Ridge Zone East	400,000	1.5	84.3	1.3	1.4	10.7
TOTAL	668,000	2.3	90.8	1.2	1.2	9.6

A geological inventory has been calculated for this area, and is as follows:

3. The "Gap" Zone

Mine exploration plans for 1991 were concentrated on following Ridge Zone East back east toward the H-W Mine Workings. In May of 1991, this program intersected a high grade polymetallic orebody in the Upper Zone stratigraphic position. the discovery hole encountered 33.1 meters grading 3.6 gm/to Au, 365 gm/to Ag, 4.5% Cu, and 0.5% Pb and 18.5% Zn. Continuing exploratory drilling has expanded this lens to dimensions of 250 meters strike length by 50 meters maximum width. The lens has a bulbous shape and appears structurally complex, but additional holes have confirmed its excellent ore grades.

Several other smaller ore lenses have now been found in the same stratigraphic position south and east of the Gap lens.

Recent reserve calculations on the Gap Zone encompass the Gap lens and these smaller lenses, and total:

RESERVE CATEGORY	TONNES	gm/to Au	gm/to Ag	% Cu	% Pb	% Zn
Geological Reserves						
- probable	432,700	2.5	180.6	2.1	1.2	13.9
- possible	347,000	2.7	167.5	1.9	1.1	13.0
- potential	135,600	4.3	180.1	2.5	1.0	16.3
TOTAL:	915,300	2.9	175.5	2.1	1.2	13.9
MINING RESERVES	513,800	2.0	144.4	1.6	1.0	11.1

Mine access from the H-W Mine is expected to reach these reserves in 1993, with initial production expected in 1994. See Figure 8, 9.

4. The Battle Zone.

Step out drilling to trace the Gap lens east resulted in the discovery of the Battle Zone ore in October 1991. This ore zone is in the Contact Zone position of the H-W Horizon, lying at the base of the H-W rhyolite. Our experience has been that ore lenses on this contact have good potential to develop into large entities with excellent continuity. With this in mind, the Battle Zone quickly became our prime target and remains so today. Drilling to date indicates a series of high grade, metal zoned massive sulphide lenses ranging up to 23 meters thick. The zone has been tested now over 530 meters of strike length, on sections spaced 100-110 meters apart on average.

RESERVE CATEGORY	TONNES	gm/to Au	gm/to Ag	% Cu	% Pb	% Zn
Geological Reserves						
- probable	1,279,000	1.3	23.0	2.9	0.4	13.3
- possible	1,067,300	1.2	23.8	3.0	0.4	13.5
- potential	672,100	1.3	26.3	3.0	0.5	16.2
TOTAL:	3,018,400	1.3	24.0	2.9	0.4	14.0
MINING RESERVES	1,518,800	1.0	18.4	2.3	0.3	10.7

Geological and mining reserve calculations continue to be updated on a regular basis. Our most recent calculation for the Battle Zone totals:

Mine access from the H-W Mine is expected by year end, with initial production coming in 1993. See Figure 10, 11, 12.

5. <u>The "H-W Extension" Zone</u>

This area, below Myra Creek Valley floor and west of the known H-W ore Zones, was initially surface drilled in 1972. Several narrow (2-3 meter thick) ore intersections were obtained in that work, but at such depths (300 meters) below surface as to make them uneconomic. Interest waned and the area had to wait its time. Discovery of the Battle Zone some 1,200 meters to the West, and the ensuing 18 Level H-W drive to access it, provided a drill platform from which to further test this area. On-going drilling from 18 Level is extending the H-W main lens and Upper Zones to the West, now an additional 870 meters. These new ore zones are low to medium grade and structurally complicated.

Much additional fill-in drilling will be required to fully understand ore zone continuity and mineability, but recently calculated geological reserves demonstrate the potential:

RESERVE CATEGORY	TONNES	gm/to Au	gm/to Ag	% Cu	% Pb	% Zn
Geological Reserves						
- probable	232,200	1.2	60.3	1.7	0.4	3.8
- potential	690,800	1.1	31.4	1.9	0.2	3.6
TOTAL:	923,000	1.1	38.7	1.9	0.2	3.6

On-going diamond drilling from 18 Level will concentrate on demonstrating ore lens continuity within the Extension Zone and tying this mineralization into the Battle Zone ore lenses. See Figure 13.

6. H-W Mine "42 and 43 Blocks"

The H-W Mine north lens trend position has been explored to the east over the last few years, toward the property scale Myra-Price fault. This effort has been successful in defining a mineable fragmental sulphide zone (43 Block) and indicating the presence of high grade massive sulphides on the H-W rhyolite lower contact to the north, and downdip, of 43 Block. These ore zones remain open to the east, to the Myra-Price fault, and across that fault offset into Thelwood Valley.

43 Block occurs as an equidimensional zone of thin massive sulphide lenses interbedded with rhyolite-sulphide-andesite volcaniclastics. Dimensions are 35-45 meters wide, 30-40 meters thick and 320 meters strike length.

42 Block <u>occurs</u> as a thin massive sulphide bed on the H-W rhyolite - FW andesite contact, is intersected in only a few drillholes and will be difficult to define from available drill platforms.

Surface drilling in Thelwood Valley has recently (January-March 1992) tested the fault offset projection of these zones, in Thelwood Valley, with positive results.

RESERVE CATEGORY	TONNES	gm/to Au	gm/to Ag	% Cu	% Pb	% Zn
Geological Reserves						
- probable	690,200	2.7	53.8	1.8	0.5	5.9
- possible	60,000	3.0	62.6	2.9	0.4	5.1
MINING RESERVE:	726,800	2.3	46.0	1.5	0.4	5.1

Geological reserves for 43 Block are calculated as follows:

No reserves have been calculated for 42 Block to date.

7. Trumpeter Zone

Discovered in February 1992, this is a high grade massive sulphide occurrence on the H-W rhyolite lower contact - and is now believed to be correlative to H-W Block 42, which lies some 1,500 meters to the west. The Thelwood Valley drill program that led to this discovery was conceived as a fill-in program to tighten up drillhole spacing across the fault offset trend of 42 and 43 Blocks. Ore grade intersections were obtained along the 43 Block trend as well. The following table lists the significant intersections in both trends:

TREND	DDH	METERS THICKNESS	gm/to Au	gm/to Ag	% Cu	% Pb	% Zn
Trumpeter	PR92	8.5	3.2	62.1	4.9	0.4	5.6
Trumpeter	PR101	3.1	4.1	95.7	11.6	0.1	1.7
Trumpeter	PR101	4.8	3.0	80.0	7.7	0.1	2.9
43 Block East	PR87	4.3	0.6	35.8	0.5	0.2	2.0
11	PR87	5.2	0.5	53.2	1.6	0.2	4.0
ł	PR94	5.4	1.1	63.5	0.1	0.8	6.4
1/	PR94	1.7	1.0	50.2	0.3	0.8	7.2

No reserve estimates have been made to date and both trends remain open to the West and East. Both Trumpeter Zone and 43 Block East lie above the H-W haulage level (24 Level) and can be accessed from the H-W Mine workings if on-going work develops a mineable reserve. See Figure 15.

Summary

This paper details some of the positive explorations results at Myra Falls Operations over the past few years. These new ore zones are, in general, significantly higher grade than current millfeed and are within striking distance of existing mine workings. Their discovery has fostered a spirit of optimism that Myra Falls Operations will remain viable, and profitable, for many years to come - as they provide for improved mill head grades and more flexibility in mining.

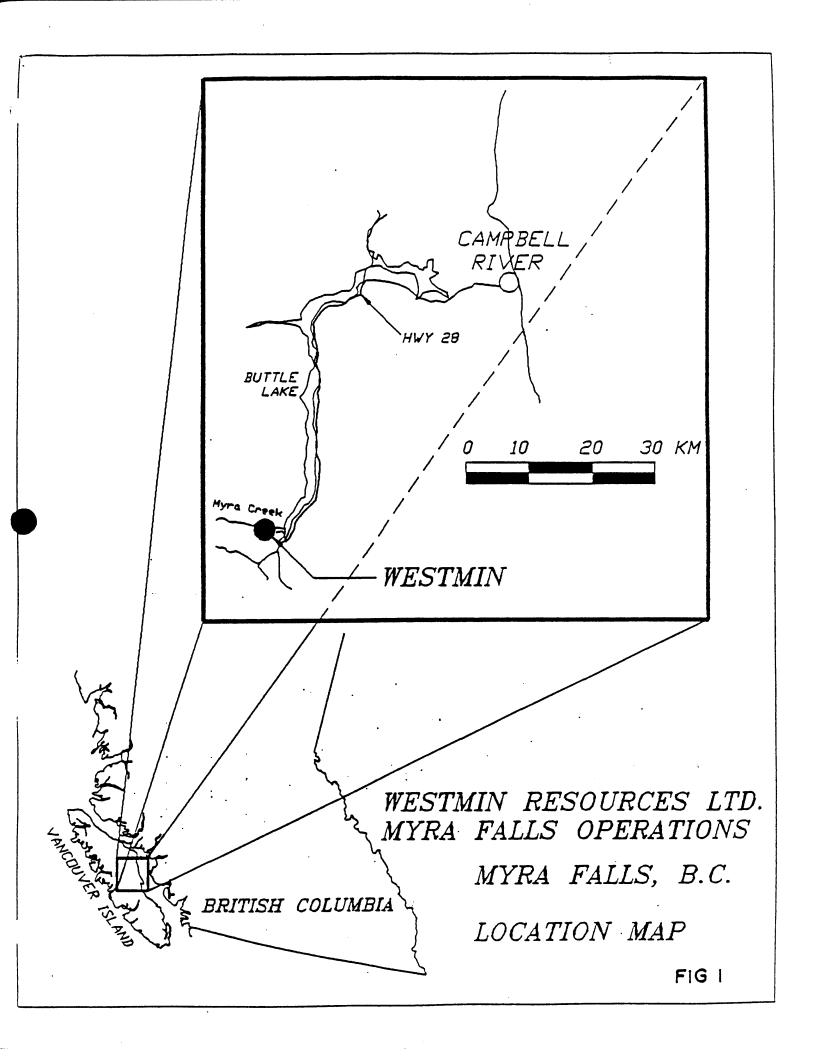
Westmin has gone through difficult times recently, in concert with much of the industry, and it is very encouraging to see our "light at the end of the tunnel" shine bright indeed.

In conclusion, let me leave you with a quote from Mr. Michael Chender, President of Metal Economic Group Inc.; words that apply through good times and bad:

"I feel very privileged to be in this industry. All of us, whether in the Exploration, Production or Financial end of the business, are directly and continually involved with the great drama of mankind. One the one hand, any kind of geopolitical upheaval or change in the world economic picture may directly affect our planning and operations. On the other hand, the development of our business is totally dependent on the way the Earth happened to burp hundreds of million of years ago.

Therefore, I'd like to point out one factor in the success of the feasibility study that you won't find in any textbook - A sense of humour, and the openness and flexibility it engenders. With the ups and downs, the bizarre twists and turns, the eurekas and the bitter disappointments that are part and parcel of prospecting and developing the Earth's wealth, it takes guts and humour to stay with it."

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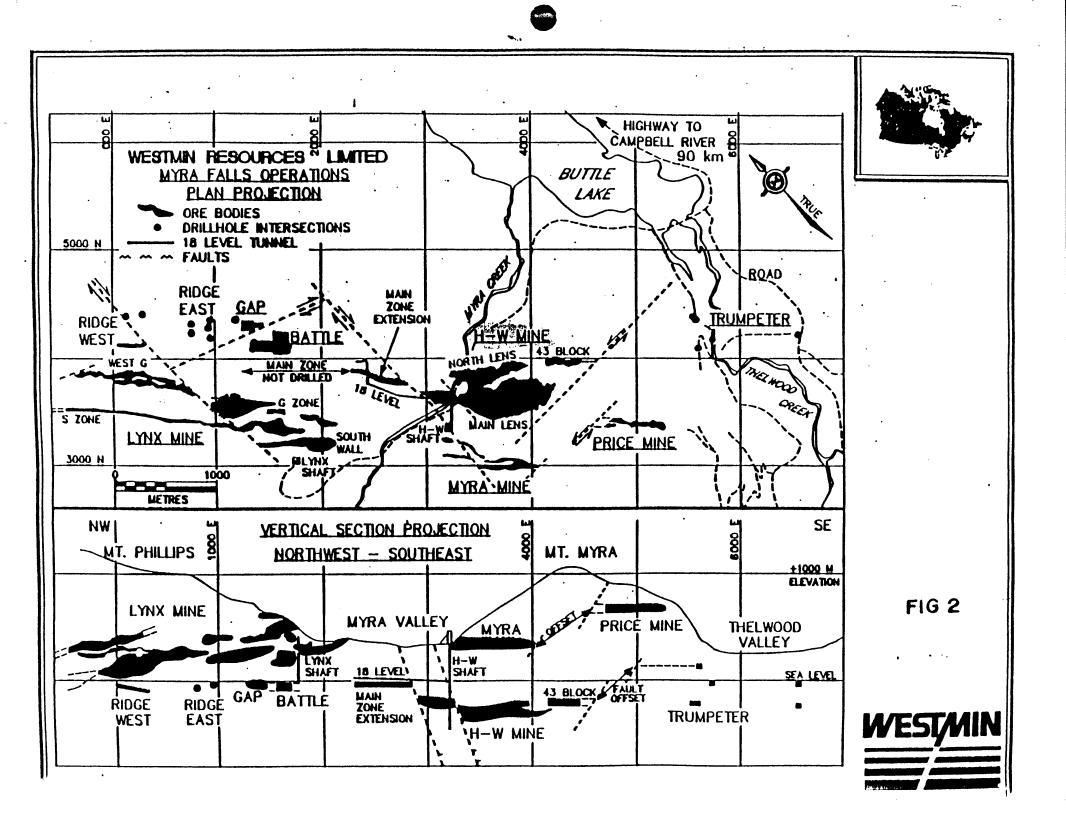


FIG. 3

GEOLOGICAL PRODUCTION AND INVENTORY BY MINE

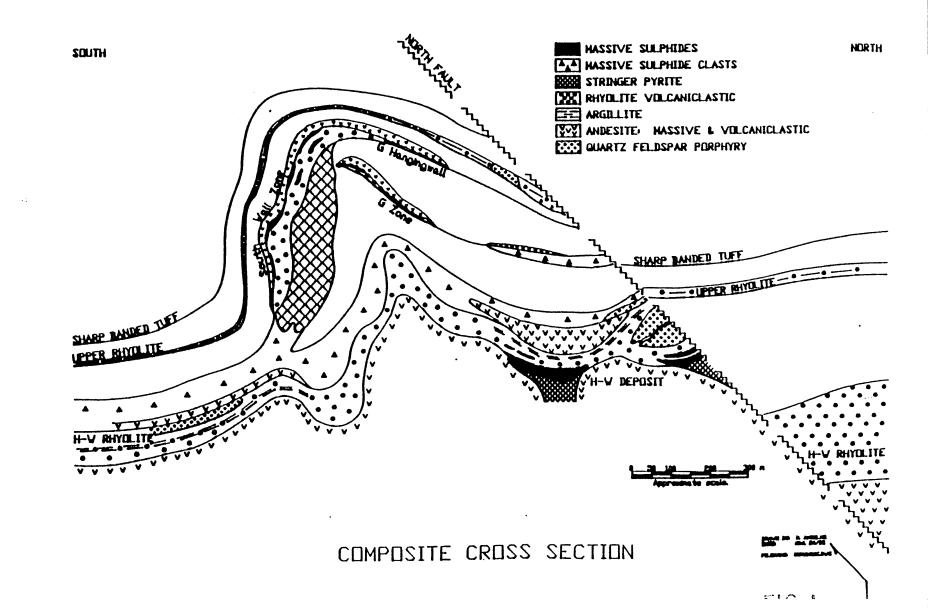
	PRODUCTIC	N TO DA	ATE			
				GRADE		
		gm/	gm/			
MINE		tonne	tonne			
	TONNES	AU	AG	<u>% CU</u>	% PB	% ZN
LYNX	5275000	2.5	90.0	1.6	1.0	7.5
MYRA	1037000	3.0	160.0	1.0	1.5	9.5
PRICE	0	0.0	0.0	0.0	0.0	0.0
HW	7225000	2.0	30.0	2.1	0.3	4.2
GAP	0	0.0	0.0	0.0	0.0	0.0
BATTLE	0	0.0	0.0	0.0	0.0	0.0
TOTAL	13537000	2.3	63.3	- 1.8	0.7	5.9
EXTENSION	0	0.0	0.0	0.0	0.0	0.0
RIDGE	0	0.0	0.0	0.0	0.0	0.0
BATTLE	0	0.0	0.0	0.0	0.0	0.0
GAP	0	0.0	0.0	0.0	0.0	0.0
TOTAL	0	0.0	0.0	0.0	0.0	0.0

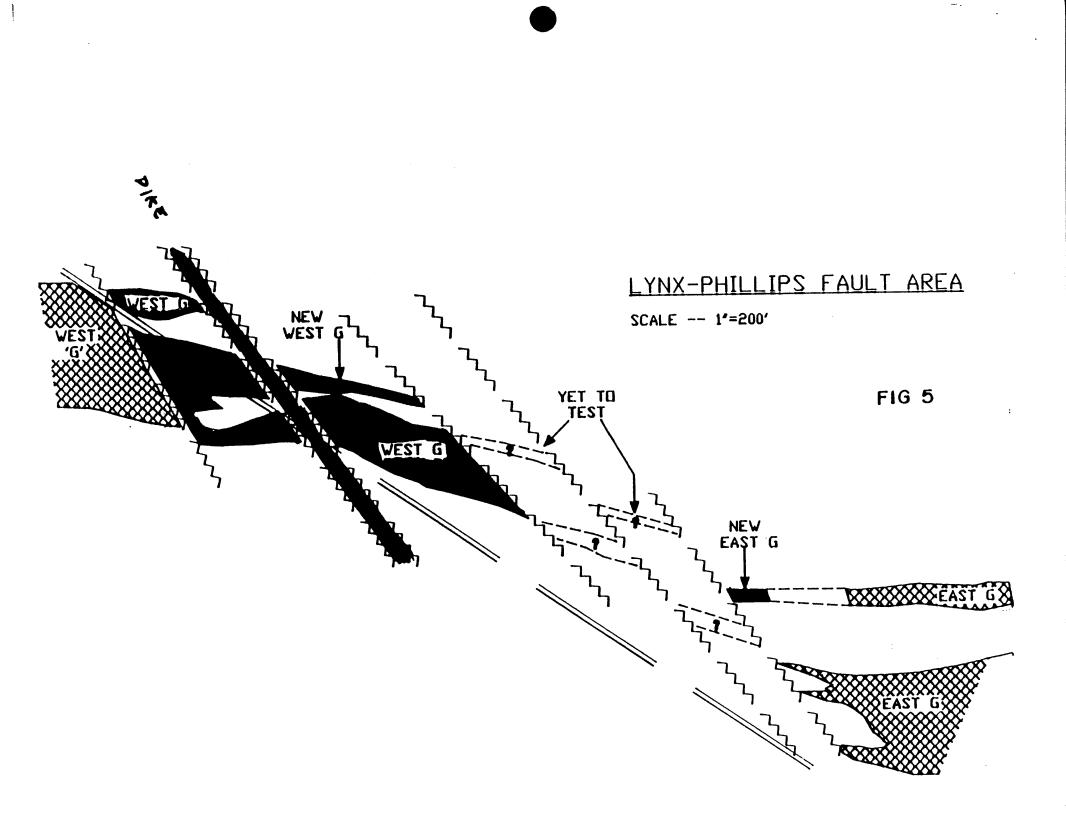
CURRENT GEOLOGICAL INVENTORY GRADE

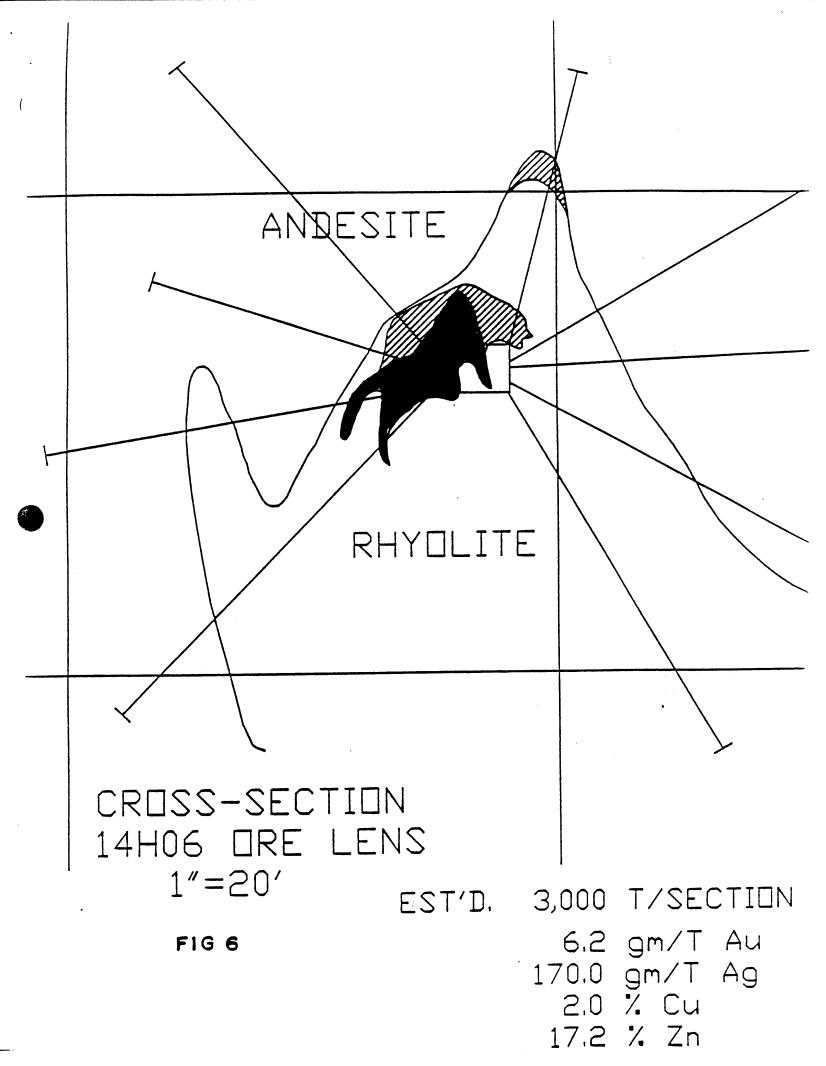
PROVEN, PROBABLE, POSSIBLE gm/ gm/ tonne MINE tonne % CU % PB % ZN AG TONNES AU LYNX 1.0 9.3 89.0 1.8 300000 2.7 0.0 0.0 0.0 0.0 MYRA 0.0 0 1.0 7.4 47.0 1.0 PRICE 231000 1.1 4.1 2.2 35.0 1.9 0.3 HW 9500000 13.7 1.3 2.0 180.9 GAP 749600 2.7 13.2 22.3 3.0 0.4 1.2 BATTLE 2071600 2.1 0.4 6.3 42.9 TOTAL 12852200 2.1

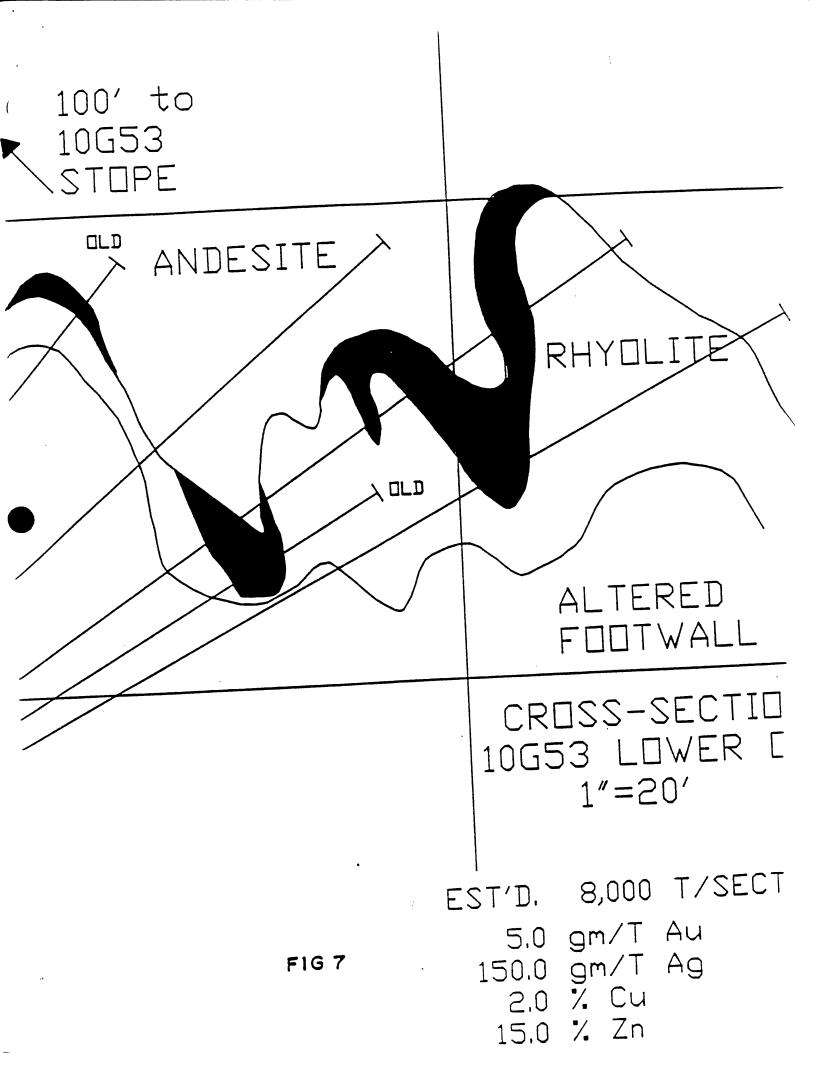
POTENTIAL, (POSSIBLE)

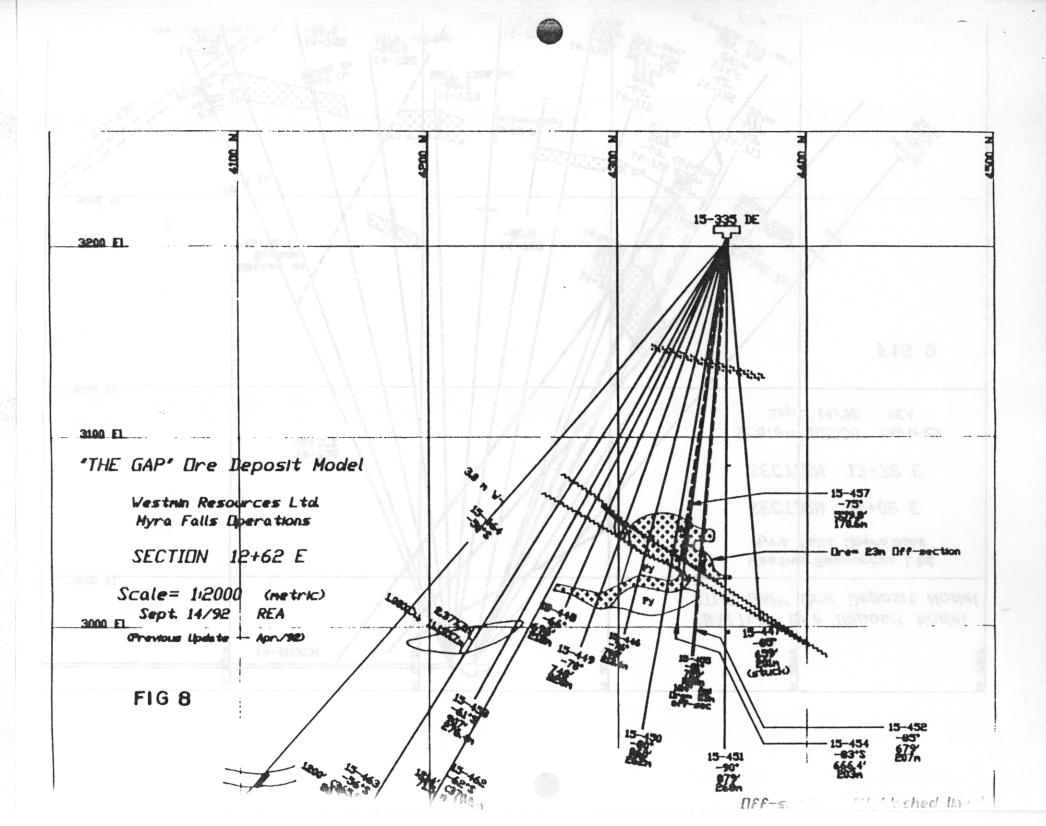
EXTENSION	923000	1.1	38.7	1.9	0.2	3.6
RIDGE	668000	2.3	90.8	1.2	1.2	9.6
BATTLE	634500	1.4	25.9	3.1	0.5	16.1
GAP	135600	4.3	180.1	2.5	1.0	16.3
TOTAL	2361100	1.7	58.1	2.1	0.6	9.4

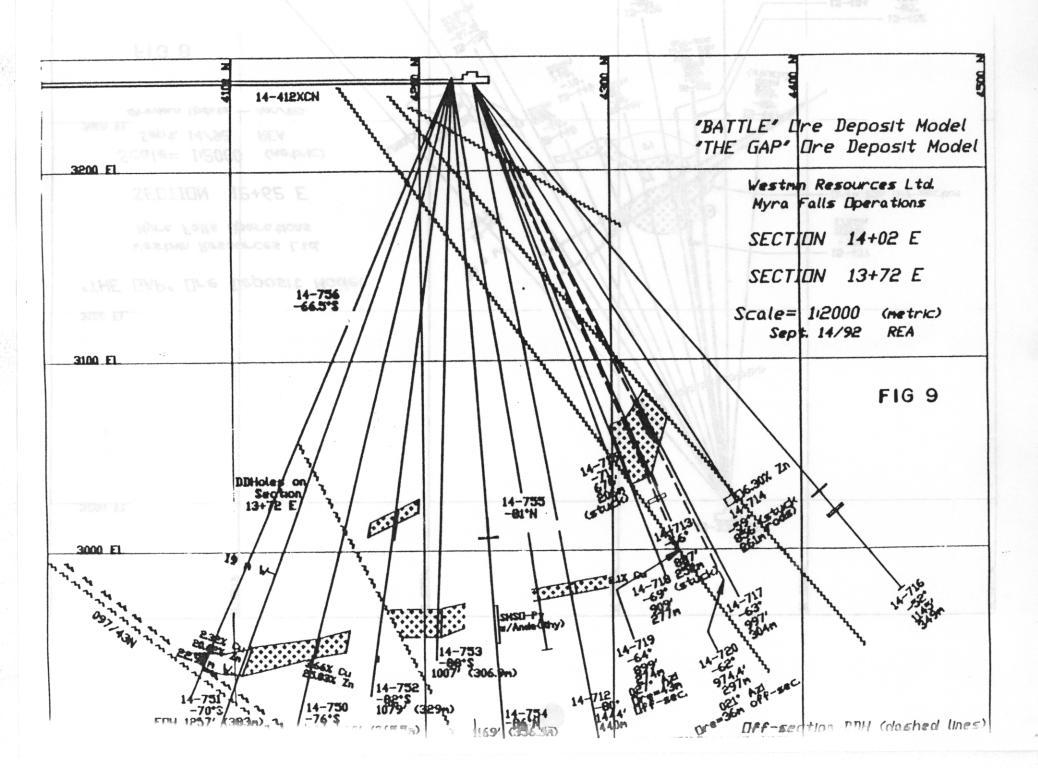


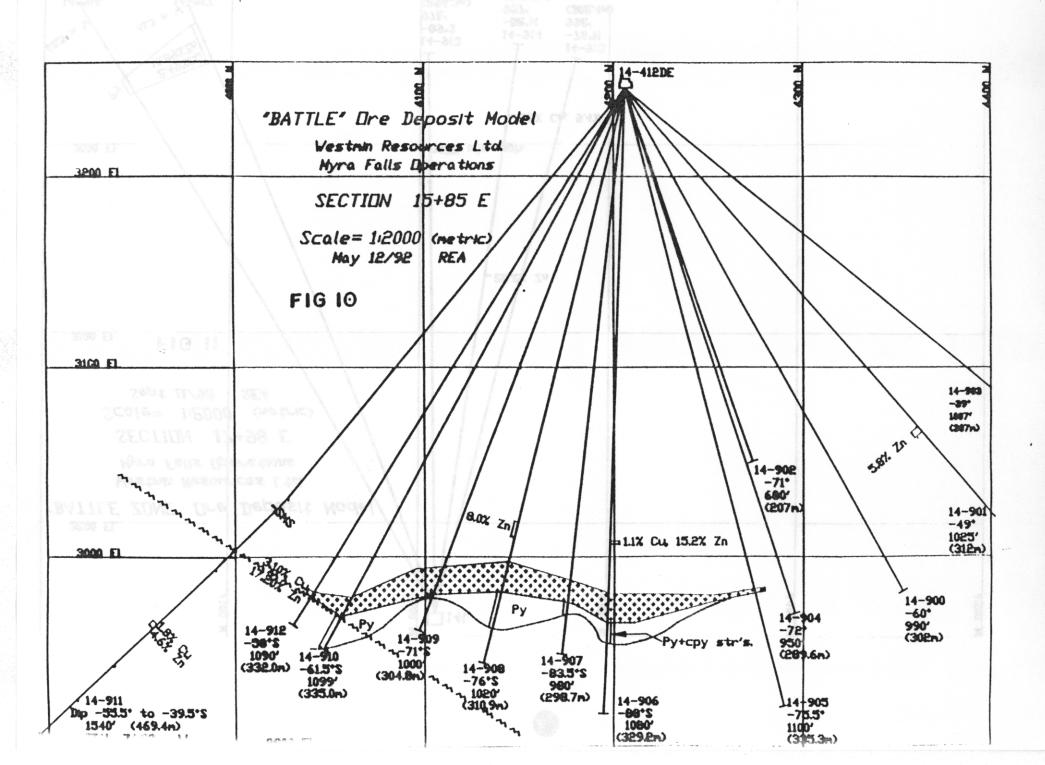


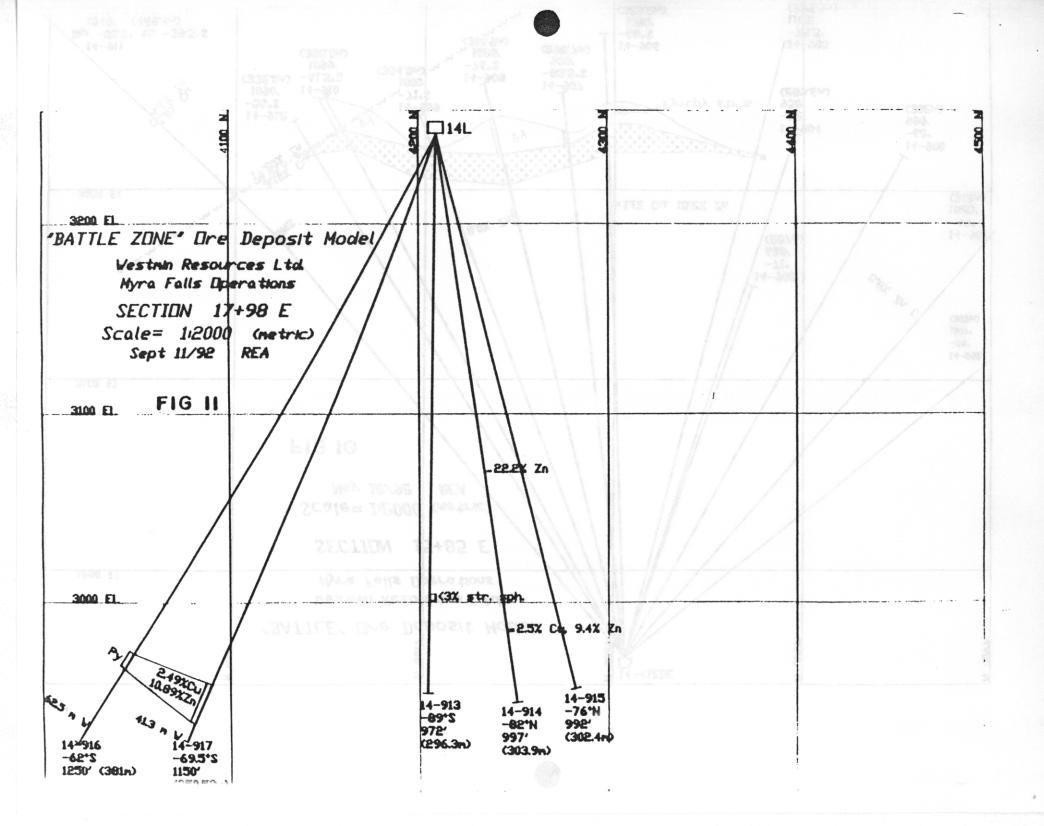


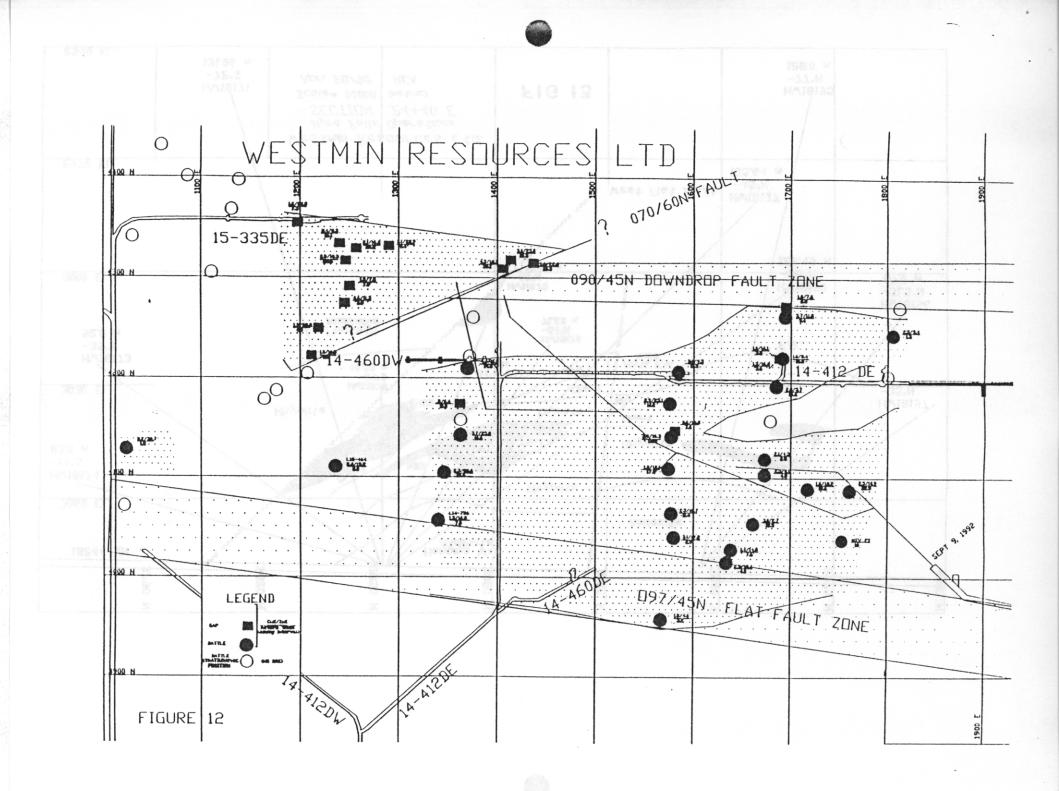


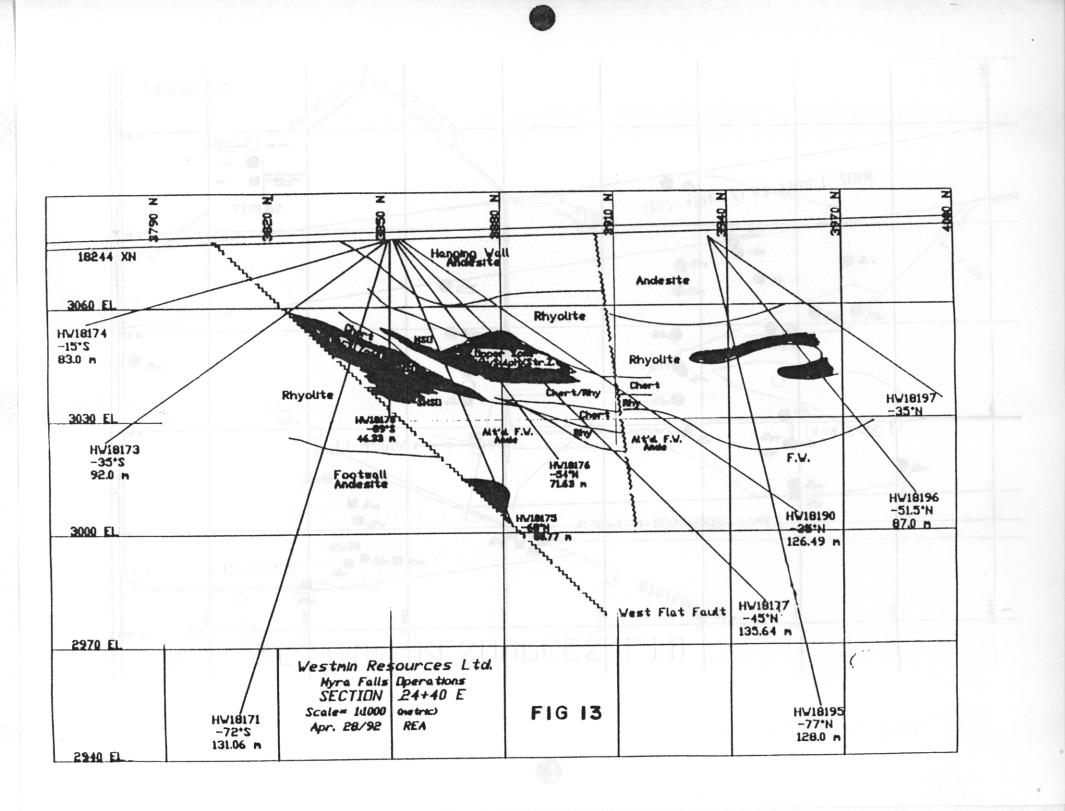


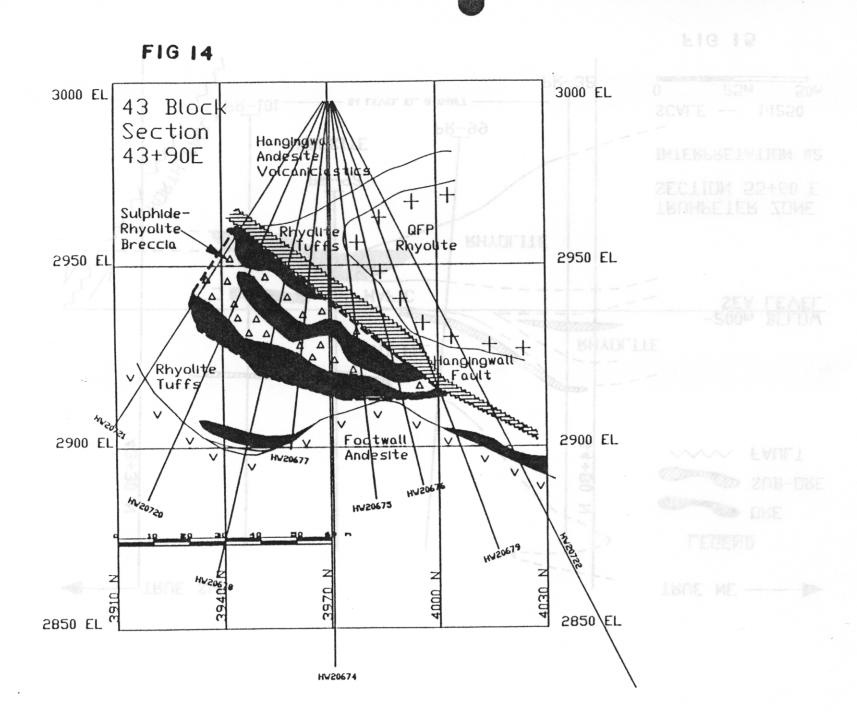


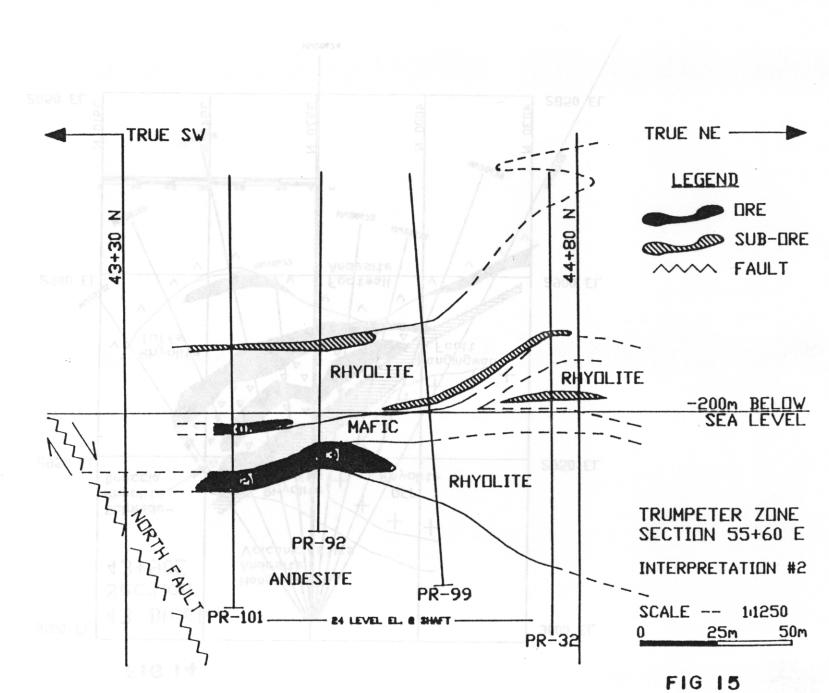












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