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REPORT ON

HYDROGEOLOGICAL ASSESSMENT OF GROUNDWATER AVAILABILITY SILVER STAR MOUNTAIN BEDROCK AQUIFIER SILVER STAR RESORT, BRITISH COLUMBIA

Submitted to:

Big White Ski Resort Ltd.
P.O. Box 2039, Station R
Kelowna, BC
V1X 4K5

DISTRIBUTION:

8 Copies - Big White Ski Resort
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August 23, 2002

022-4027

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August 20, 2002 022-4027 (5000)

Big White Utilities
P.O. Box 2039, Station "R"
Kelowna, British Columbia
V1X 4K5

Attention: Mr. Maurice Valcourt, Vice President

RE: HYDROGEOLOGICAL ASSESSMENT OF GROUNDWATER AVAILABILITY SILVER STAR MOUNTAIN BEDROCK AQUIFER SILVER STAR RESORT, BRITISH COLUMBIA

Dear Sir:

Golder Associates Ltd. (Golder) is pleased to submit this report presenting the results of a hydrogeological assessment of potential groundwater availability on Silver Star Mountain, near Vernon, BC. The purpose of the assessment was to determine if a sustainable quantity of groundwater is available for potable water supply for the current Silver Star Ski Resort and planned expansion by the new owners of the resort, Big White Utilities Ltd.

The objectives of this hydrogeological assessment is to assess the long term, sustainable yield available from the **bedrock** aquifer in the immediate area of the resort, which is being considered for further development.

Verbal authorization to proceed with this assessment was provided by Mr. Maurice Valcourt of Big White Utilities on February 28, 2002.

1.0 BACKGROUND

It is understood that the additional development of Silver Star resort requires identifying and developing a water source to compliment the current groundwater usage. Golder has previously conducted a preliminary hydrogeological assessment as well as the testing and rating of three unused wells on the ski hill. Two reports were issued in 2002 presenting results of this work. The reports are entitled "Well Capacity Testing, Silver Star Resort, Vernon, British Columbia", dated March 27, 2002 and "Addendum to Well Capacity Testing, Silver Star Resort, Vernon, British Columbia", dated May 3, 2002.

The North Okanagan Regional District (NORD) and North Okanagan Water Authority (NOWA) in reviewing the applications by Big White Utilities to further develop the Resort, requested additional studies be undertaken to determine the potential total groundwater yield of the aquifer.

This report addresses the concerns raised by NOWA.

2.0 AVAILABLE INFORMATION

2.1 Hydrogeological Setting

Silver Star Resort is located approximately 15 km northeast of Vernon, in the Shuswap Highlands of the Okanagan Valley. The location of the Resort is shown in Figure 1.

According to the Geological Survey of Canada (J. Untershultz 2002), the geology of the Silver Star area is composed of Slocan group rocks, described as "carbonaceous and calcareous argillite, slate, metasiltstone, metasandstone, metaconglomerate, grey to white metalimestone, and augite porphyry". Bedrock in the Silver Star Resort area generally strikes to the north and dips towards the east at an approximate 30° angle.

The topography in the immediate area is steeply sloping. The summit at Silver Star is the highest point in the Shuswap Highlands, at an elevation of approximately 1900 m amsl, while the main village is at approximately 1600 m amsl. Slopes are covered with thin soil veneer, which supports trees and scrub vegetation. Vance Creek, BX Creek and Putnam Creek are the main drainage basins in the area. The climate in the area consists of warm and dry summers with cool, moist winters.

2.2 Previous Investigations by Golder

There are eleven water wells known to exist at Silver Star Resort. Wells 1 through 5 are located in the village area and are currently, or were previously, used to supply the current demands of the village. The wells reportedly yield between 60 gpm and 120 gpm of water. Well 6 provides water for the Paradise Restaurant, a day lodge on the north side of the resort, and is located approximately 400 m south of the restaurant, between the Putnam Chair Lift and the reservoir. Wells 7 through 11 are located primarily north and east of the village area. The locations of the wells are shown in Figure 1. Based on available well log information, all wells at the Silver Star Resort intercept water bearing fractures at between 40 m to 70 m depth.

Golder completed testing and analysis of 3 unused wells on the ski hill to determine if sufficient quantities of water were available from these wells for short terms expansion plans of the resort. Based on the results of the three well capacity tests, Well 8, located at the based of Putnam Chair lift, is capable of yielding 11 USgpm; Welli7, located at the base of the Yellow Chair lift, is capable of yielding 2 USgpm; and, Well 10, located at the top of the Vance Chair lift, is capable of yielding 10 USgpm.

All wells at the resort appear to be completed in the same bedrock aquifer. The fracture network provides channels for water recharge by infiltrating precipitation from higher elevation upland areas. There is a finite volume of water that can be extracted from the aquifer without causing depletion and this quantity is estimated later in this report.

In response to the concerns raised by NOWA regarding the reliability of the calculated long-term well yields for Well 7, Well 8 and Well 10, Golder reviewed historical climate and static water level data for the area to determine the relative influence of these factors on well yield.

There is a correlation between precipitation in the area and static water levels within the bedrock aquifer on Silver Star Mountain. Years of high total precipitation correspond with years when static water levels are highest and years with low total precipitation correspond with years when static water levels are the lowest. This is reflected in the lowest static water levels recorded on the site in 1999, which occurred within a period when three of the four lowest precipitation years on record were reported.

2.3 Geological Mapping

Recent mapping of the Shuswap Highlands in the area of Silver Star Mountain was completed in 1998 and 1999 and published in an M. Sc. thesis by Untershutz (2002). The information has been incorporated into a 1:50,000 scale map available from the Geological Survey of Canada. The mapping indicates that the majority (approximately 90%) of Silver Star Mountain is capped by metamorphosed (folded and faulted) bedrock from the Slocan Group, which is described as carbonaceous and calcareous argillite, slate metasiltstone, metasandstone and metaconglomerate rock from the Upper Triassic /early Jurassic period. The formation is designated as Ms in the mapping.

The Ms formation is underlain unconformably by a carbonaceous pelitic to semi-pelitic phyllite and schist, which is also metamorphosed. This formation is designated as Pcs in mapping and outcrops along the western flank of Silver Star Mountain, immediately west of the Resort Village.

Both the Ms and Pcs formations are described as heavily foliated (layered) and moderately fractured. They are believed to collectively represent the fractured bedrock aquifer.

Underlying the Pcs formation is an amphibole / biotite, quartz-rich granite, which is described by Untershutz as less foliated and believed to represent the base of the fractured bedrock aquifer.

The geology of the area and interpreted extent of the bedrock aquifer is shown in Figure 2 and Figure 3.

2.4 Climate Data from Environment Canada

Climate information is collected at Silver Star Mountain Resort on a daily basis throughout the ski season and sporadically throughout the off season. The climate in the area consists of warm summers and cool, moist winters. In order to assess if seasonal or long-term trends in precipitation have potentially effected aquifer yield, Golder reviewed available data from the nearest long-term reporting weather station at Coldstream Ranch, located approximately 20 km south of the site. Table 1 summarizes the available data for this weather station, which has been reporting climate data since 1981.

Based on a review of the data, mean annual total precipitation for the Coldstream Ranch is 480 mm. The maximum annual precipitation for the site is 616 mm recorded in 1996 and the minimum is 362 recorded in 2000. A plot of cumulative precipitation difference (CPD), or the cumulative variation from the mean, was prepared using the data. The plot shown in Figure 4 indicates that a large variation in annual precipitation has occurred commencing in 1994 and ending in 2001. The peak of the CPD curve over this period indicates the end of 4 successive years of above average precipitation and the downslope of the curve indicates 4 successive years of less than normal precipitation. It should be noted that two of the lowest precipitation years on record occurred in the last 3 years.

2.5 Groundwater Observation Well Data

Information was obtained from the Ministry of Water, Land and Air Protection (MWLAP) Groundwater Management Section regarding historical static water levels in the fractured bedrock on Silver Star Mountain. The Ministry operates a monitoring well on the mountain as part of their province-wide observation well network. MWLAP Observation Well MW-047 is located approximately 100 m northwest of the microwave tower near the peak of Silver Star Mountain. The well is a 50 mm diameter borehole, which extends to 91 m depth in the fractured bedrock and was commissioned for the monitoring of groundwater levels in 1965. The borehole log for the well does not indicate the depth of fractures in the well, however, it is assumed that water-bearing fractures were encountered near the bottom of the borehole, where the Pba granite was encountered.

Data from the observation well was used to determine for each year the mean annual static water level (MSWL), lowest recorded static water level (LRSWL), highest recorded static water level (HRSWL) and total yearly fluctuation. The LRSWL is representative of conditions during the mid-winter period when static water levels are historically lowest and the HRSWL of conditions during spring snowmelt when runoff provides recharge to the bedrock aquifer. Figure 4 shows the yearly fluctuations in LRSWL and HRSWL in MW-047. The maximum variation in LRSWL is approximately 3 m, ranging from 7 m in 1996-1997 to almost 10 m in 1988. These extremes correspond to periods following the lowest and highest annual precipitation years recorded at Coldstream Ranch respectively. The data indicate that a strong correlation with precipitation exists and that there is no long-term trend of decline in water levels during the peak winter demand period.

The maximum variation in HRSWL is approximately 5 m, ranging from 6 m in 1985-1986 to almost 1 m in 1995. These extremes also correspond to periods following the lowest and highest annual precipitation years recorded at Coldstream Ranch respectively. The data also indicate that a strong correlation with precipitation exists and that there is no long-term trend of decline in water levels during spring recharge.

3.0 ASSESSMENT OF AQUIFER CHARACTERISTICS

3.1 Physical Properties

Based on interpretation of borehole logs and the Geological Survey of Canada Map for the area, the aquifer is indicated to exist in fractured rock zones within the two most upper rock types in the Shuswap Highlands, which are the Ms and Pcs formations. The higher degree of foliation associated with the phyllite and/or schist in the deeper Pcs formation may exhibit more secondary permeability and storage capacity than the upper Ms formation. The massive nature of the underlying Pba granite, which subcrops the Pcs formation, likely acts as an aquitard or base of the aquifer. Therefore, for practical purposes, the two upper-most formations on the mountain are considered to be the same aquifer, which dips at approximately 30 degrees in a west to east direction.

Borehole logs suggest that the width of fracture zones in the Pcs and Ms formations ranges between 5m and 15 m and the depth of fracturing is inconsistent. In general, higher flow rates are reported in the borehole logs at the greater depths. Using an average saturated thickness of 12.5 m and an average transmissivity of 4.5 m^2/day as determined from pumping tests completed by Golder in wells W7, W8 and W10, the bulk hydraulic conductivity for the aquifer is 0.36 m/day. These fractures however, have a relatively low storativity, or capacity to store water.

The Pcs formation outcrops immediately to the west of the Village and this area is considered an important recharge zone for the aquifer. Static water levels in the aquifer become more artesian to the east, which suggest that recharge occurs at higher elevations in the western portion of the aquifer.

For practical purposes, the horizontal extent of the aquifer is considered to be the width of outcropping of the Pcs formation (8 to 9 km wide), which occurs along the western limits of the mountain, extending to the east to where the Pba granite (the base of the aquifer) outcrops approximately 12 km away, along the eastern limits of the mountain. The total area of the aquifer is therefore estimated to be between 96 and 108 km^2. This is shown in Figure 3.

3.2 Water Budget

Based on information provided by NOWA, the five wells currently used for supply to the village yield at most a total of 120 USgpm. The wells run at full capacity from December to April each year when demand is highest. Assuming as a worst case scenario, that peak usage is maintained throughout the year, the total aquifer withdrawal would be approximately 250,000 m3/year, or 6.6 $x10^7$ USgal/y.

The approximate extent of the watershed that recharges the aquifer is shown on Figure 3 and totals approximately 96,000 ha. Average annual precipitation at the Coldstream Ranch, located 18.5 km south of the site and 1000 m lower in elevation, is approximately 484 mm/y. Given the substantial difference in elevation, the average annual precipitation for Silver Star Mountain has been adjusted upwards by 25 percent to be in the order of 600 mm/y.

A small portion of this precipitation will infiltrate down to the groundwater with the rest lost as surface runoff and evapotranspiration. The degree of infiltration or recharge to an aquifer is a function of the permeability of the soil and degree of slope in the recharge area.

Given that the majority of the mountain is considered to be moderately to steeply sloping and the soil cover is minimal, it is estimated that approximately 2 to 5 percent of the annual precipitation infiltrates down to the aquifer. Moreover during June, July, August and September, evapotranspiration exceeds precipitation, and a significant moisture deficit occurs in the area. Therefore the precipitation available for infiltration is considered to be the precipitation that does not normally occur during those months. This "available precipitation" is generally 35% less than the total annual precipitation. Therefore using 2 to 5 percent of this "available precipitation" and an area of 96 km^2 for the aquifer, yields an estimated average recharge rate to the aquifer of between $7.5x10^6$ m^3/yr and $1.9x10^7$ m^3/yr.

Using the worst precipitation year on record, which was 362 mm at Coldstream Ranch and adjusting this amount to reflect the moisture deficit in June, July, August and September in 2000, the reasonable worst case on record of recharge to the aquifer is approximately $5.6x10^6$ m^3/yr ($1.5x10^9$ USgal/yr).

Another method of estimating the water balance and recharge to the aquifer is to estimate the groundwater flow through the aquifer. This represents the amount of recharge to the aquifer that would be required to sustain the water levels observed in the aquifer. This calculation is based on several aquifer characteristics, including bulk transmissivity, width of aquifer and hydraulic gradient. The approximate water elevations in wells W2, W7 and W8 (locations shown in Figure 3) suggest a gradient of approximately 0.087. Using an aquifer width of 9000 m and a transmissivity of 4.5 m^2/d (based on the average of pumping tests conducted at W7, W8 and W10), the annual groundwater flow is calculated to be approximately $1.3x10^6$ m3/yr. This is equivalent to 650 USgpm total groundwater annual flow, and considering the existing withdrawals of 120 USgpm, would leave the potential for approximately 530 USgpm of additional groundwater resource. This groundwater flow is calculated from well testing completed during the winter months when the levels and transmissivity values were near the lowest for the year. Consequently as the groundwater flow calculation does not account for seasonally high water levels and groundwater flow during the spring recharge, it is considered to be a conservatively low estimate of the potential annual groundwater yield.

3.3 Development Potential

Based on the water budget and physical characteristics of the aquifer, potential for development of additional water wells exists. Assuming that aquifer properties including minimum fractured rock zone width of 10 to 15 m and transmissivity ranging from 3 to 6 m2/day are relatively consistent across the aquifer, there is a medium to high potential to obtain yields of 10 to 20 USgpm from an individual well. It is also conservatively estimated that up to 200 USgpm of additional sustainable groundwater yield could be obtained from the bedrock aquifer. These yield values will be verified through long-term monitoring of aquifer water levels.

Future water wells should extend to the full depth of the Pcs formation and should be located where static water levels are highest, thus maximizing available drawdown. New wells should also be positioned at safe distances from existing wells to limit the potential for mutual well interference from simultaneous pumping. Based on a cursory review of pumping records for the operating wells in the village, the minimum distance between operating wells should be 600 m. Development costs are expected to be lower towards the west end of the aquifer, where the Pcs formation outcrops at surface and drilling depth will be less. Piping distance and connection costs to the existing water distribution system at the Resort will also be lower at the west end of the aquifer. Elevation difference and distance between the east end of the aquifer and the resort results in large system pressure pumping costs.

3.4 Water Quality

Based on the results of water quality testing previously completed by Golder during the evaluation of wells W7, W8 and W10, iron and turbidity exceed the BC MWLAP drinking water standards and/or the Canadian Council of Ministers of the Environment (CCME) drinking water guidelines in Well 7 and Well 8. Iron and turbidity are aesthetic water quality parameters, which frequently are elevated in wells completed in bedrock. The wells are still usable with the elevated turbidity and iron. These levels may improve with some additional pumping from each well, however water treatment may be necessary if no improvement is observed.

Although no wells are completed at the extreme western end of the aquifer, it is likely that groundwater will be of better quality in this area since this portion of the aquifer is in closer proximity to the surface, such that the travel and residence times, which both effect groundwater quality, will be less.

Continued development of Silver Star Mountain and the Ski Resort is expected to elevate the need for protection strategies for individual wells and the aquifer itself. Considering the aquifer is hosted in fractured bedrock which is relatively close to ground surface and that only a thin cover of soil is present above the aquifer, the water quality in the aquifer is relatively vulnerable to contamination from surface spills and effluent from septic fields.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of this investigation, the following conclusions can be made:

- The Silver Star Mountain Bedrock aquifer lies within the two uppermost rock formations in the area of the resort.
- The aquifer has an areal extent of approximately 96 km^2 within the Ms and Pcs formations.
- The minimum annual recharge to the aquifer is approximately $5.6x10^6$ m^3/yr ($1.5x10^9$ USgal/yr).
- The annual flow through the aquifer is estimated to be $1.3x10^6$ m3/y.
- The current known withdrawls from the aquifer are estimated to be a maximum of 250,000 m^3/yr, or 6.6 $x10^7$ USgal/y.
- Assuming aquifer properties including transmissivity and fractured rock zone thickness remain relatively consistent throughout the aquifer, further

development potential exists for wells capable of delivering 10 to 20 USgpm each. It is further conservatively estimated that up to 200 USgpm of additional sustainable groundwater yield can be obtained from the bedrock.

- Highest potential for development exists at western end of aquifer where the Pcs formation outcrops at ground surface. Good development potential also exists at the east end of the aquifer.
- Water quality is relatively good and marginally exceeds Canadian Drinking Water Guidelines for aesthetic parameters including iron and turbidity, which can be treated.
- Groundwater is expected to be of better quality at the west end of the aquifer.
- Well Head and Aquifer protection strategies should be developed and implemented as the aquifer is relatively vulnerable to contamination from surface spills and septic effluent.

Based on the above conclusions, the following recommendations are made:

- Drilling and testing of a test production well within the Pcs formation is recommended along the western portion of the aquifer.
- The well should be positioned at least 600 m away from any operating well.
- The target yield for the well is 20 USgpm.

5.0 LIMITATIONS

This report was prepared for the exclusive use of Big White Utilities and is intended to provide an assessment of groundwater availability at the site. The investigation was performed according to current professional standards and practices in the groundwater field. The assessment of groundwater conditions presented has been made using historical and technical data collected and information from sources noted in the report. If new information is discovered during future work, including excavations, borings or other studies, Golder should be requested to provide amendments as required.

In evaluating the groundwater resources of the property, Golder has relied in good faith on information provided by the drilling contractors, the pumping test contractors and other parties noted in this report. We accept no responsibility for any deficiency, misstatements or inaccuracies contained in this report as a result of omissions, misinterpretations or fraudulent acts of others.

Any use which third parties make of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Golder Associates Limited accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

6.0 CLOSURE

We trust the foregoing provides the information you need at this time. Should you have any questions or require additional information, please do not hesitate to contact the undersigned.

Yours very truly,

GOLDER ASSOCIATES LTD.

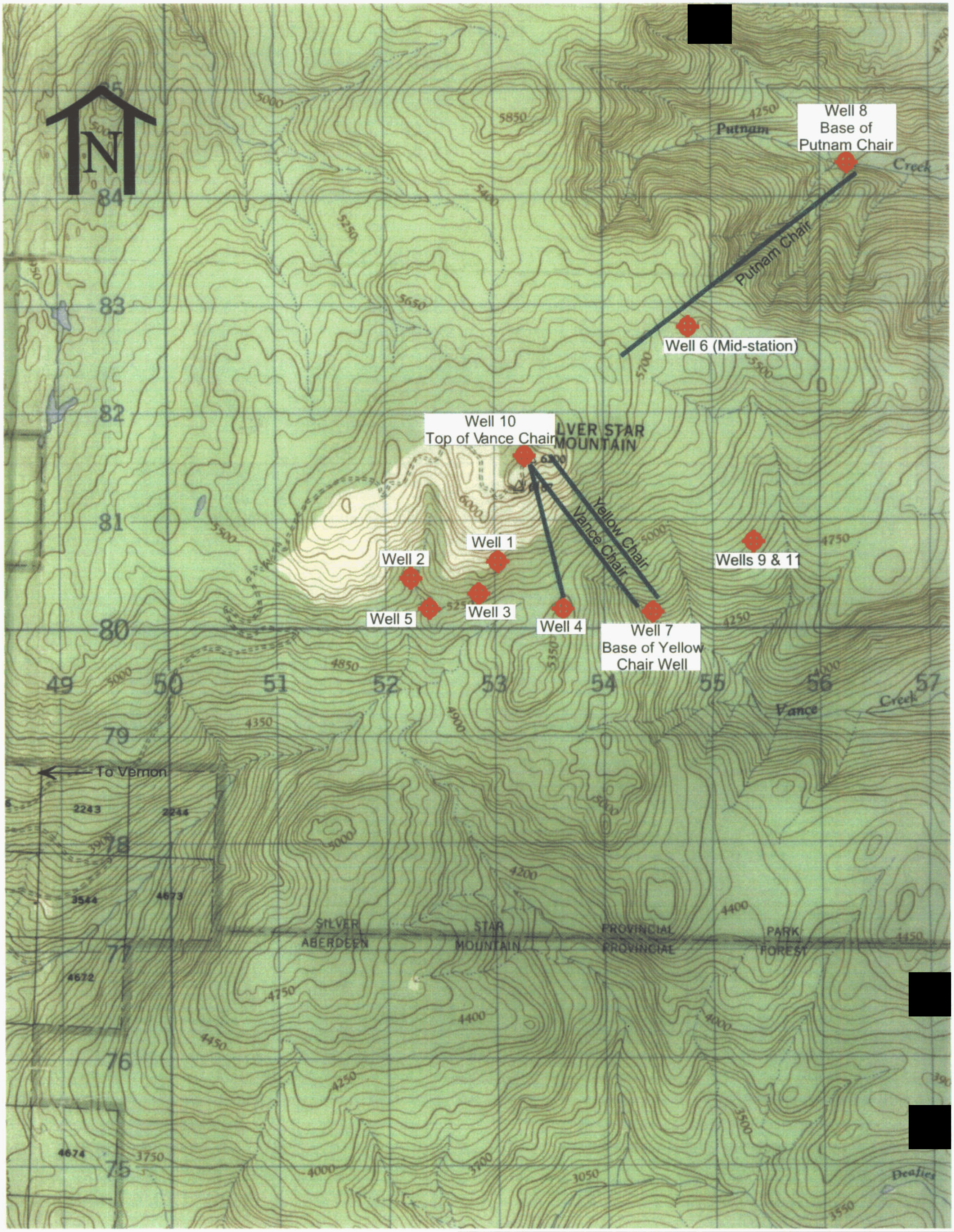
Remi Allard, M.Eng., P.Eng.
Senior Hydrogeologist

Reviewed by: Don Chorley, M.Sc., P.Geo.
Senior Hydrogeologist, Associate

Encl.
RJPA/DC/at
N:\Active\4000\022-4027 Silver Star (Big White) - Wells & Water Reservoir\Task 5000\0224027 aquifer yield report final.doc

Table 1 - Summary of Precipitation Data Vernon Coldstream Ranch

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year	Mean	Rank	Cum. Precip. Departure (CPD)	Cum. Mean
1981	16.7	46.8	33.2	27.8	73.2	67.5	64.6	36.8	58.5	38.0	25.8	63.9	552.8	479.8	6.0	73.0	552.8
1982	91.5	38.5	40.4	14.8	41.8	55.4	93.1	36.2	64.6	28.0	68.0	35.3	607.6	479.8	2.0	200.7	580.2
1983	53.9	53.7	31.2	51.8	29.0	57.5	66.0	38.4	34.6	25.8	51.0	49.0	541.9	479.8	7.0	262.8	567.4
1984	36.8	13.3	37.9	25.2	65.0	63.0	8.1	56.1	32.4	37.2	53.9	43.5	472.4	479.8	12.0	255.3	543.7
1985	4.2	41.4	13.0	20.2	36.8	46.8	8.8	44.2	69.8	70.4	33.1	37.0	425.7	479.8	15.0	201.2	520.1
1986	37.7	37.7	30.8	53.2	28.4	82.2	43.8	23.4	78.8	19.0	41.1	3.0	479.1	479.8	11.0	200.4	513.3
1987	24.4	6.0	21.2	30.4	32.0	7.8	40.8	22.6	13.8	18.3	25.6	57.7	300.6	479.8	21.0	21.2	482.9
1988	25.6	26.8	15.2	62.2	63.6	85.5	57.6	49.2	56.6	30.4	40.7	56.9	570.3	479.8	4.0	111.6	493.8
1989	24.3	32.8	24.2	20.2	50.0	62.0	51.0	70.6	25.4	22.0	33.2	26.6	442.3	479.8	14.0	74.1	488.1
1990	36.0	12.2	16.2	20.2	86.2	94.8	39.8	32.0	10.6	30.2	61.4	69.4	509.0	479.8	8.0	103.2	490.2
1991	46.0	32.8	11.6	22.0	59.4	50.8	21.0	60.0	5.0	10.8	57.0	6.0	382.4	479.8	19.0	5.8	480.4
1992	41.8	20.2	16.6	28.2	23.8	37.7	37.6	31.2	49.8	29.2	85.8	89.2	491.1	479.8	10.0	17.0	481.3
1993	46.0	11.8	21.2	57.6	28.0	54.4	131.2	36.4	44.2	49.0	18.2	62.2	560.2	479.8	5.0	97.4	487.3
1994	27.0	65.0	15.3	30.2	16.2	58.0	16.0	59.0	16.0	41.4	47.3	31.8	423.2	479.8	17.0	40.7	482.8
1995	46.6	21.8	41.4	39.5	13.2	74.6	26.4	62.6	21.4	40.0	121.6	71.7	580.8	479.8	3.0	141.7	489.3
1996	38.2	31.4	26.6	36.0	118.4	48.0	25.2	16.9	72.6	68.4	81.0	54.0	616.7	479.8	1.0	278.5	497.3
1997	38.9	21.0	33.9	10.4	77.4	43.0	117.4	33.4	65.4	25.2	8.0	28.2	502.2	479.8	9.0	300.9	497.5
1998	42.2	7.8	33.2	30.6	19.6	36.0	29.0	26.0	28.0	46.2	51.0	94.8	444.4	479.8	13.0	265.4	494.6
1999	32.6	21.8	20.0	9.6	48.4	45.2	40.6	57.0	19.0	48.8	42.4	38.4	423.8	479.8	16.0	209.4	490.9
2000	36.2	27.0	25.0	31.8	34.2	36.6	50.4	14.2	47.2	19.6	12.2	28.0	362.3	479.8	20.0	91.8	484.4
2001	17.0	3.2	16.0	31.0	43.8	77.2	41.0	17.8	16.6	52.0	32.2	40.2	388.0	479.8	18.0	0.0	479.8
2002	31.8	21.2	14.8	20.0	53.8	19.4	-	-	-	-	-	-	-				
Mean Monthly	36.2	27.0	24.5	30.6	47.4	54.7	48.1	39.2	39.5	35.7	47.2	47.0	479.8				



Kilometers

0 1 2

Chair Lift

Well

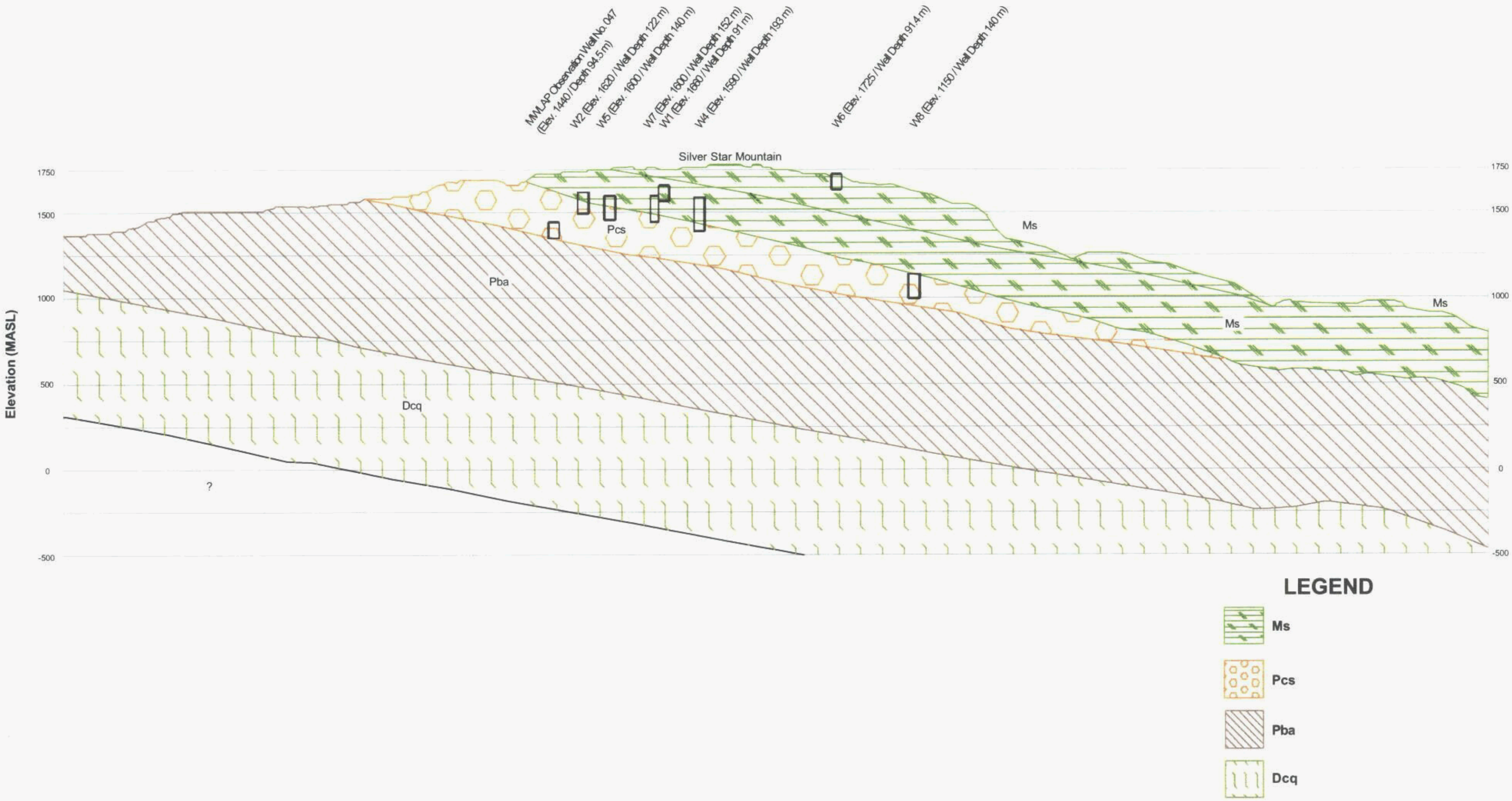
Golder Associates

Key Plan
Silver Star Mountain Resort
Vernon, B.C.

Drawn: SN	App'd:	Date: Mar 27-02	Figure: 1

Project No.: 022-4027 Revision No.:

PROJEC... 022-4027 DRAWN BY: SN REVIEWED BY: DATE: Mar 27-02 FILE LOCATION: n:\active\4000\022-40...res\Figure1_Key plan.cdr



SOURCE: Unterschutz, J.L.E
2002: Figure 2-1, Geological and geochemical links between Quesnel "terrane" strata and ancestral North America, southern Canadian Cordillera, M. Sc. thesis, University of Alberta, Edmonton, AB.

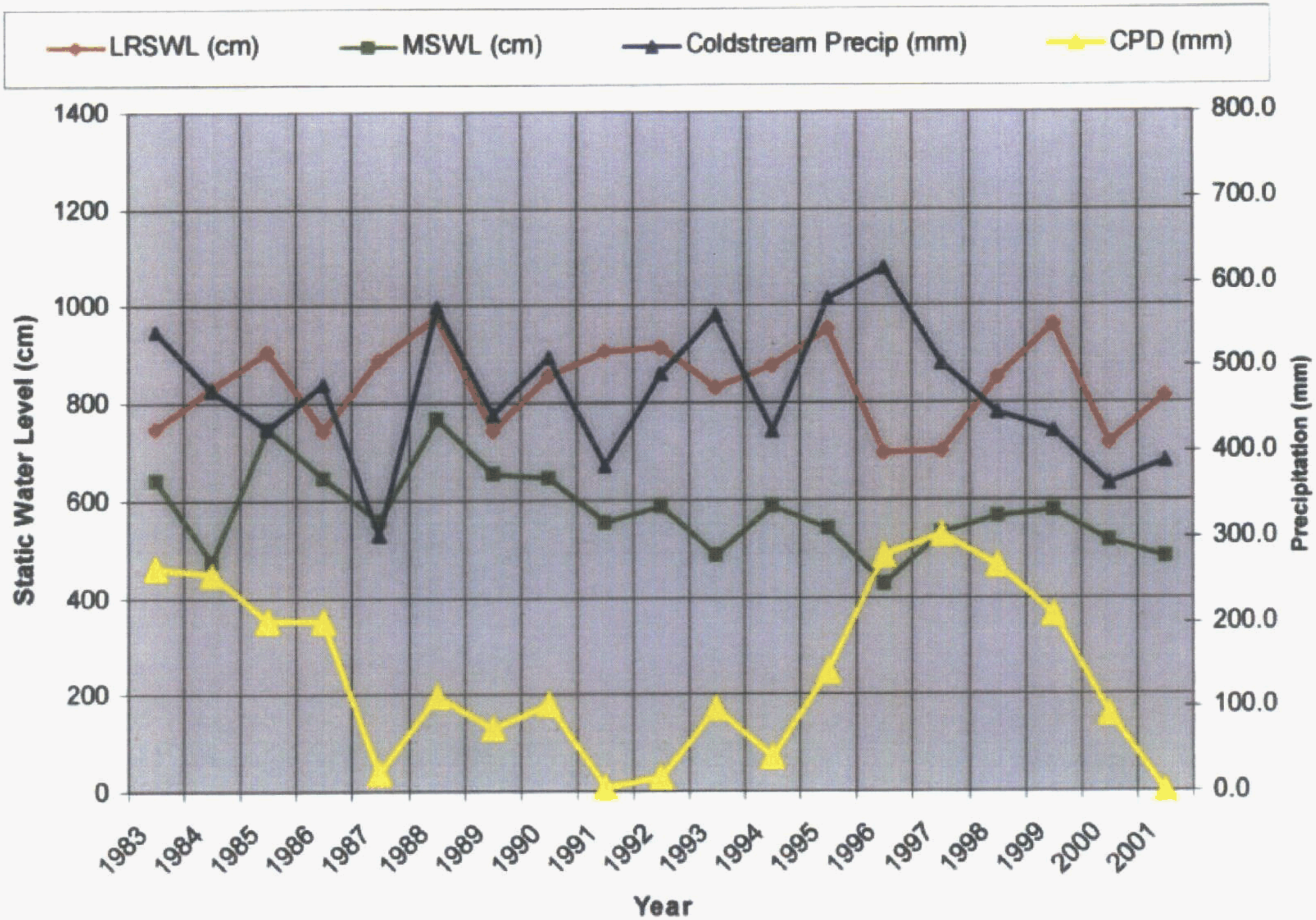
BOREHOLES: MWLAP & Discussions with Drillers

Golder Associates
Kelowna, BC

SCALE	AS SHOWN	TITLE	SECTION A - A' SILVER STAR AQUIFER
DATE	08/21/02		
DESIGN	SN		
CADD	SN		
FILE No. Figure 3	CHECK	RA	
PROJECT No. 022-4027-5000	REV.	REVIEW	SILVER STAR	FIGURE 3

Drawing file: Aquifer Study Area.dwg Aug 23, 2002 - 2:17pm

Drawing file: Figure 04_LRSWL and MSWL.dwg   Aug 29, 2002 - 8:09am



Golder Associates
KELOWNA, B.C.

PROJECT No.	022-4027
REV.	
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SCALE	NTS
DATE	05/03/02
DESIGN	SN
DRAWN	SN
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REVIEW	

TITLE

Lowest Recorded and Mean Static Water Level (LRSWL and MSWL) in MWLAP ObsWell 047 at Silver Star Resort versus Precipitation Data at Coldstream Ranch

SILVER STAR

Figure **4**