

Technical Report on the Shotgun – Winchester Project, SW Alaska

prepared for

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Summary

The Shotgun Project is located in south western Alaska approximately 150 km north of Dillingham, 190 km west of Iliamna and 190 km south of Donlin Creek. The Shotgun Ridge prospect is centred at 548310 m east and 6697260 m north, and the Winchester prospect is centred at 550335 m east and 6679880 m north. (Both coordinates are in UTM Zone 4 using NAD27 Alaska as the datum). The aggregate area covered by the claims is 6556 hectares (16200 acres). The project lies entirely within the Taylor Mountains 1:250,000 scale quadrangle.

The Shotgun property consists of 144 claims (totalling 6556 hectares) located entirely on Alaska State land within the Kuskokwim and Bristol Bay Recording Districts.

The area is predominantly underlain by Cretaceous, marine sediments of the Kuskokwim Group. A number of intrusive bodies ranging in composition from granite to syenite intruded the Kuskokwim, the more important in late-Cretaceous time. Some of these intrusions appear to be directly related to gold mineralization. The sediments usually gently to moderately dipping. In the southern half of the property, broad, open folds are identified primarily with subhorizontal axes oriented from 120 to 145°. This is consistent with a NE-SW compressional environment with additional influence possibly due to doming associated with the Shotgun Pluton. In areas where the intensity of hornfels increases, bedding orientation is often obscured or not present.

Exploration activities from discovery in 1983 to 2006 have identified a north-south oriented string of gold prospects of which Shotgun Ridge is the most developed. Recent work by TNR Gold Corp has identified gold bearing latite sills in the Winchester prospect area. From 2003 to 2007 TNR collected and analysed 1326 soil and talus fines samples, 313 stream silt samples, 1011 rock samples and drilled 2861m of core with 946 core samples.

The exploration concept at Shotgun and Winchester targets a multiphase, intrusion related gold system. Intrusions of various compositions were emplaced within a compressional environment evidenced by NE oriented right lateral strike slip faulting and open folding with NW oriented axes. In the north (Shotgun), NW oriented dilational jogs or relay zones host mineralized quartz breccia while in the south (Winchester), mineralization is primarily hosted in latite sills with little or no veining or brecciation. Between these two extents, a number of gold and pathfinder

anomalies have not yet been explained in bedrock and should be explored using the model developed from the two mineralizing styles and the revised structural model.

An exploration programme including compilation, 4,000m drilling at Shotgun and Winchester with additional mapping and prospecting is recommended. This programme should be designed to effectively fill a field season with a budget of \$3.1 million USD.

Introduction

This report has been prepared for TNR Gold Corp in accordance with NI43-101 as an update of the previous technical report (Freeman, 2004) focusing on work conducted from 2004 to 2006. During this period prospecting, geochemical surveys, geological mapping and diamond drilling resulted in the discovery of a mineralized zone at the Winchester prospect. The management of TNR Gold Corp determined that there are sufficient new results to warrant an updated technical report on the project and instructed the author to prepare this report. Some sections of this report are taken directly from Freeman (2004) with only minor editing. These may not be acknowledged explicitly in the text other than here. Diagrams provided in Freeman (2004) are not reproduced in this report to reduce the (digital) size of the document and the reader is encouraged to consult that report.

The author of this report has been involved with the exploration of the Shotgun project since 2003, and since 2004 has been the senior TNR geologist responsible for the exploration programme. He has been on the property during all stages of the exploration and has had access to technical data held by TNR Gold Corp. The author also acknowledges the many other professionals and experts whose work, comments and discussions have significantly contributed to the exploration programme and this report.

Reliance on other Experts

This report does not rely on experts who are not qualified persons under NI 43-101. Although legal opinions on land status have not been sought all statements about land status have been checked and are believed to be accurate.

Property Description and Location

The Shotgun Project is located in UTM Zone 4 between 543400 m and 553100 m East, 6678400 m and 6698500 m North (NAD27 Alaska) in south western Alaska approximately 150 km north of Dillingham, 190 km west of Iliamna and 190 km south of the Donlin Creek gold deposit. The project lies entirely within the Taylor Mountains quadrangle.

The aggregate area of the claims is 6556 hectares (16200 acres). This area forms two groups of continuous claims. One covers the Winchester prospects in the south, while the other group covers the remaining prospects in the north – Shotgun Ridge, Shot and King.

The closest edge of Wood Tikchik State Park is over 13 km to the SW of Shotgun Ridge and 6 km W of the Winchester discovery area. There are currently no encumbrances regarding the protected area and the current exploration activities. Wood Tikchik State Park is the largest State Park in the USA with 1.6 million acres of park which are only accessible by air. Commercial sport fishing lodges operate on private land within the park. The closest lodge is 35 km to the south of the Winchester prospect.

ADL	Name	Number	Meridian	Township	Range	Section	K	BB
361470	Mose	551	Seward	T4N	R51W	28		x
361471	Mose	552	Seward	T4N	R51W	27		x
361472	Mose	553	Seward	T4N	R51W	27		x
361473	Mose	554	Seward	T4N	R51W	27		x
361474	Mose	651	Seward	T4N	R51W	28		x
361475	Mose	652	Seward	T4N	R51W	27		x
361476	Mose	653	Seward	T4N	R51W	27		x
361477	Mose	654	Seward	T4N	R51W	27		x
361478	Mose	751	Seward	T4N	R51W	28	x	x
361479	Mose	752	Seward	T4N	R51W	27		x
361480	Mose	753	Seward	T4N	R51W	27		x
361481	Mose	754	Seward	T4N	R51W	27		x
361482	Mose	851	Seward	T4N	R51W	28	x	x
361483	Mose	852	Seward	T4N	R51W	27		x
361484	Mose	853	Seward	T4N	R51W	27		x
361485	Mose	854	Seward	T4N	R51W	27		x
547457	Mose	350	Seward	T4N	R51W	33		x
547458	Mose	351	Seward	T4N	R51W	33, 34		x
547459	Mose	352	Seward	T4N	R51W	34		x

ADL	Name	Number	Meridian	Township	Range	Section	K	BB
547460	Mose	353	Seward	T4N	R51W	34		x
547461	Mose	354	Seward	T4N	R51W	34		x
547462	Mose	355	Seward	T4N	R51W	34		x
547463	Mose	356	Seward	T4N	R51W	34, 35		x
547464	Mose	450	Seward	T4N	R51W	28, 33		x
547465	Mose	451	Seward	T4N	R51W	27, 28, 33, 34		x
547466	Mose	452	Seward	T4N	R51W	27, 34		x
547467	Mose	453	Seward	T4N	R51W	27, 34		x
547468	Mose	454	Seward	T4N	R51W	27, 34		x
547469	Mose	455	Seward	T4N	R51W	27, 34		x
	Mose		Seward	T4N	R51W	26, 27, 34, 35		x
547470		456						
547471	Mose	550	Seward	T4N	R51W	28		x
547472	Mose	555	Seward	T4N	R51W	27		x
547473	Mose	556	Seward	T4N	R51W	26, 27		x
547474	Mose	650	Seward	T4N	R51W	28	x	x
547475	Mose	655	Seward	T4N	R51W	27		x
547476	Mose	656	Seward	T4N	R51W	26, 27		x
547477	Mose	749	Seward	T4N	R51W	28	x	
547478	Mose	750	Seward	T4N	R51W	28	x	x
547479	Mose	755	Seward	T4N	R51W	27		x
547480	Mose	756	Seward	T4N	R51W	26, 27		x
547481	Mose	849	Seward	T4N	R51W	28	x	
547482	Mose	850	Seward	T4N	R51W	28	x	
547483	Mose	855	Seward	T4N	R51W	27		x
547484	Mose	856	Seward	T4N	R51W	26, 27		x
547485	Mose	949	Seward	T4N	R51W	21	x	
547486	Mose	950	Seward	T4N	R51W	21	x	
547487	Mose	951	Seward	T4N	R51W	21, 22	x	
547488	Mose	952	Seward	T4N	R51W	22	x	x
547489	Mose	953	Seward	T4N	R51W	22		x
547490	Mose	1049	Seward	T4N	R51W	21	x	
547491	Mose	1050	Seward	T4N	R51W	21	x	
547492	Mose	1051	Seward	T4N	R51W	21, 22	x	
547493	Mose	1052	Seward	T4N	R51W	22	x	x
547494	Mose	1053	Seward	T4N	R51W	22	x	x
594543	Mose	5751	Seward	T4N	R51W	27, 28	x	x
594544	Mose	5851	Seward	T4N	R51W	27, 28	x	x
594545	Mose	5852	Seward	T4N	R51W	27	x	x
644618	Shot	1	Seward	T3N	R51W	29		x
644619	Shot	2	Seward	T3N	R51W	28		x
644620	Shot	3	Seward	T3N	R51W	28		x

ADL	Name	Number	Meridian	Township	Range	Section	K	BB
644621	Shot	4	Seward	T3N	R51W	27		x
644622	Shot	5	Seward	T3N	R51W	22		x
644623	Shot	6	Seward	T3N	R51W	21		x
644624	Shot	7	Seward	T3N	R51W	21		x
644625	Shot	8	Seward	T3N	R51W	20		x
644626	Shot	9	Seward	T3N	R51W	20		x
644627	Shot	10	Seward	T3N	R51W	21		x
644628	Shot	11	Seward	T3N	R51W	21		x
644629	Shot	12	Seward	T3N	R51W	22		x
644630	Shot	13	Seward	T3N	R51W	15		x
644631	Shot	14	Seward	T3N	R51W	16		x
644632	Shot	15	Seward	T3N	R51W	16		x
644633	Shot	16	Seward	T3N	R51W	17		x
644634	Shot	17	Seward	T3N	R51W	16		x
644635	Shot	18	Seward	T3N	R51W	16		x
644636	Shot	19	Seward	T3N	R51W	9		x
644637	Shot	20	Seward	T3N	R51W	9		x
644638	Shot	21	Seward	T3N	R51W	8		x
644639	Shot	22	Seward	T3N	R51W	8		x
644640	Shot	23	Seward	T3N	R51W	8		x
644641	Shot	24	Seward	T3N	R51W	8		x
644642	Shot	25	Seward	T3N	R51W	9		x
644643	Shot	26	Seward	T3N	R51W	9		x
644644	Shot	27	Seward	T3N	R51W	4		x
644645	Shot	28	Seward	T3N	R51W	4	x	x
644646	Shot	29	Seward	T3N	R51W	5	x	x
644647	Shot	30	Seward	T3N	R51W	5	x	x
644648	Shot	31	Seward	T3N	R51W	5	x	
644649	Shot	32	Seward	T3N	R51W	5	x	
644650	Shot	33	Seward	T3N	R51W	4	x	x
644651	Shot	34	Seward	T3N	R51W	4		x
644652	Shot	35	Seward	T4N	R51W	33		x
645878	King	1	Seward	T3N	R51W	29		x
645879	King	2	Seward	T3N	R51W	28		x
645880	King	3	Seward	T3N	R51W	28		x
645881	King	4	Seward	T3N	R51W	27		x
645882	King	5	Seward	T3N	R51W	32		x
645883	King	6	Seward	T3N	R51W	33		x
645884	King	7	Seward	T3N	R51W	33		x
645885	King	8	Seward	T3N	R51W	34		x
644574	Win	1	Seward	T2N	R51W	22		x
644575	Win	2	Seward	T2N	R51W	22		x

ADL	Name	Number	Meridian	Township	Range	Section	K BB
644576	Win	3	Seward	T2N	R51W	23	x
644577	Win	4	Seward	T2N	R51W	23	x
644578	Win	5	Seward	T2N	R51W	24	x
644579	Win	6	Seward	T2N	R51W	24	x
644580	Win	7	Seward	T2N	R51W	24	x
644581	Win	8	Seward	T2N	R51W	24	x
644582	Win	9	Seward	T2N	R51W	23	x
644583	Win	10	Seward	T2N	R51W	23	x
644584	Win	11	Seward	T2N	R51W	22	x
644585	Win	12	Seward	T2N	R51W	22	x
644586	Win	13	Seward	T2N	R51W	20	x
644587	Win	14	Seward	T2N	R51W	20	x
644588	Win	15	Seward	T2N	R51W	19	x
644589	Win	16	Seward	T2N	R51W	19	x
644590	Win	17	Seward	T2N	R51W	18	x
644591	Win	18	Seward	T2N	R51W	18	x
644592	Win	19	Seward	T2N	R51W	17	x
644593	Win	20	Seward	T2N	R51W	17	x
644594	Win	21	Seward	T2N	R51W	16	x
644595	Win	22	Seward	T2N	R51W	16	x
644596	Win	23	Seward	T2N	R51W	15	x
644597	Win	24	Seward	T2N	R51W	15	x
644598	Win	25	Seward	T2N	R51W	14	x
644599	Win	26	Seward	T2N	R51W	14	x
644600	Win	27	Seward	T2N	R51W	13	x
644601	Win	28	Seward	T2N	R51W	13	x
644602	Win	29	Seward	T2N	R51W	13	x
644603	Win	30	Seward	T2N	R51W	13	x
644604	Win	31	Seward	T2N	R51W	14	x
644605	Win	32	Seward	T2N	R51W	14	
644606	Win	33	Seward	T2N	R51W	15	
644607	Win	34	Seward	T2N	R51W	15	
644608	Win	35	Seward	T2N	R51W	16	
644609	Win	36	Seward	T2N	R51W	16	
644610	Win	37	Seward	T2N	R51W	17	
644611	Win	38	Seward	T2N	R51W	17	
644612	Win	39	Seward	T2N	R51W	18	
644613	Win	40	Seward	T2N	R51W	18	
644614	Win	41	Seward	T2N	R51W	7	
644615	Win	42	Seward	T2N	R51W	7	
644616	Win	43	Seward	T2N	R51W	8	
644617	Win	44	Seward	T2N	R51W	8	

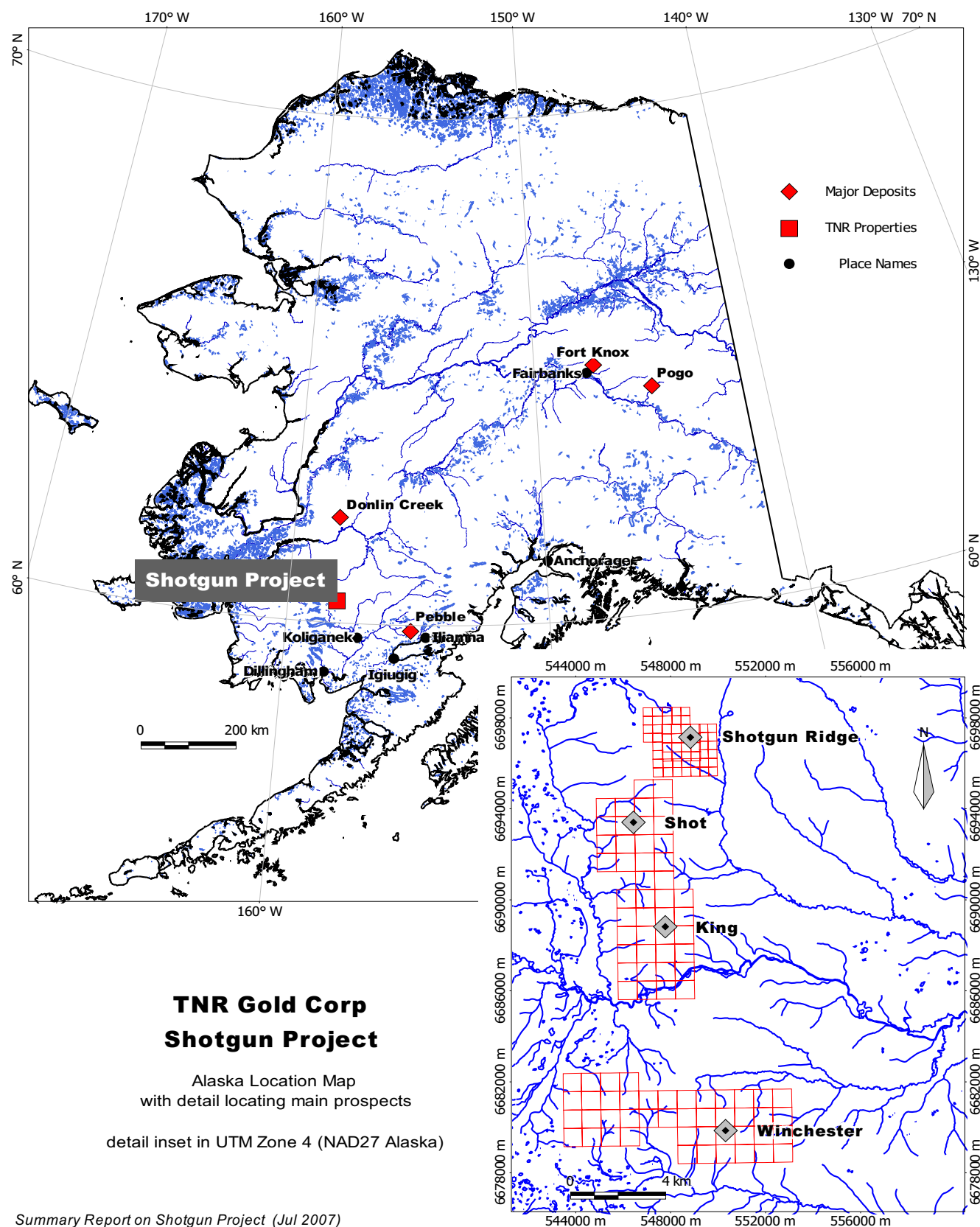
Table 1: List of Claims and Recording Information

In the preceding table the last two columns (K and BB) indicate if the mining claim lies within the Kuskokwim or Bristol Bay Recording Districts. Mining claims that straddle the boundary are marked as being in both districts.

All Mose claims (57 claims) are held by NovaGold Resources Inc. Of these claims, 19 are subject to a 5% net proceeds interest held by Cominco American Inc., a subsidiary of Teck Cominco Inc. The remaining 87 claims are held by TNR Gold Corp. By the end of June 2006, TNR Gold Corp had completed their required expenditure and were vested in the Shotgun property at 50%. On August 16, 2006, the Company and NovaGold agreed to continue the exploration program on the Shotgun property with each participant contributing 50%.

There are three types of State Mining Claims: 1) Traditional, 2) Quarter-Quarter Section and 3) Quarter Section MTRSC. The Mose claims are quarter-quarter section claims and the remainder are all quarter section MTRSC claims. A State tax known as *Annual Claim Rental* is payable by November 30th each year for State Mining Claims. The annual amount is based on the type, size and age. Rental due on 30 November 2007 will be \$15,885. Each year following the year of staking a minimum amount of eligible work must be performed on the claims and reported in an affidavit by November 30th, or cash paid in lieu which would be due by 31st August. The combined claims have an annual work commitment of \$40,500. If excess work is conducted then it may be banked for up to four years to use for credit toward annual work commitments. Credit has been banked during the last two seasons of work. All claims are currently in good standing. Permitting for future exploration work can be acquired from the Alaska Department of Natural Resources as needed.

Claims have been located using hand held GPS equipment and a combination of ground based and air supported access. In the execution of exploration activities field personnel have come across claim posts. Posts noticed to date have been in the correct locations within the accuracy of the GPS equipment being used.



Accessibility, Climate, Local Resources, Infrastructure and Physiography

Access to Shotgun area is primarily by helicopter although a few light aircraft have landed on the flat-top ridge just above camp. Another flat-top ridge about 15 km SSE of Shotgun camp has been used for landing a single engine DHC Otter and Cessna 207. This unimproved strip with approximately 300m of usable length, is known as “10 Mile Strip” and can be used from when the ground is dry enough to permit the Otter to land, to when weather prevents access in the Fall. The closest strip with scheduled flights is at Koliganek, about 84 km southwest of camp. Access to Koliganek is by scheduled flights and charters from Dillingham. When river conditions permit, commercial barge services are used to bring heavy cargo into Koliganek. In addition to Dillingham, Iliamna also has good paved runways and regular freight services. For smaller operations when it is not practical to open the camp at Shotgun, several bed and breakfast services can be found in Koliganek and Ekwok – the next closest village. When in operation, Shotgun camp has supported a 12 to 20 person crew. The camp has consisted of aluminium frame tents with plywood floors. Tents and frames are taken down for the winter. Water is local and in good supply.

Fuel and supply staging was done through a combination of Koliganek and 10-Mile Strip. Drill mobilization was done through a combination of Iliamna, Koliganek and Dillingham using scheduled freight services with DC-6, Bell 204 and Shorts Sherpa charter aircraft. Helicopter support has included Robinson R44s and MD 500s for daily crew movements and light to moderate lift, with cargo only rated Bell 204s for heavier lift requirements and when volume (such as camp mobilization and initial fuel shipments) warranted.

Elevations within the area range from 200m in the major river valleys to peaks with elevations of 830m (Winchester prospect), 800 to 850m (Shotgun Ridge area), 767m (Shot prospect) and 708m (King prospect). In the poorly drained bottomlands and along river meanders a variety of deciduous trees such as Alder (*Alnus*), Willow (*Salix*) and Balsam Poplar (*Populus Balsamnifera*) are found. In the lowlands, away from the scrub brush, the ground tends to be tussocky taiga which combined with the scrub slows traverses of these areas. A moderate distance up slope, and for the majority of the prospects, travel by foot is good across talus and alpine tundra. Many of the vegetated slopes and ridge tops have good crops of berries including blueberries, low-bush cranberries, crow berries and cloudberry.

The Shotgun area is influenced by both continental and maritime weather systems. Summers at Shotgun are moderated by the Bearing sea which generates mild summer temperatures, clouds and higher precipitation. The closest weather station to Shotgun is at Koliganek which records the coldest and warmest months as January (-17 to -7°C) and July (7 to 17°C) respectively. Precipitation is typically low in January through April with a peak in August (76mm) followed by September (69mm). Shotgun Hills are open and frequently windy. The prevailing winds are from the SSE however the ridges create complex local wind patterns which necessitates the use of pilots experienced in mountain flying. Weather reports from Dillingham and Koliganek are typically a good indication of what may be expected at Shotgun.

While individual years can vary, the exploration season at Shotgun cannot reasonably be expected to start before early June or finish later than early October. Weather conditions in September may reduce productivity to the point where it is not longer effective. Significant snow drifts along the lee side of ridges, north slopes and in draws can still exist well into June which can hamper mapping and sampling. Snow drifts in the vicinity of the camp site can complicate mobilization and camp construction in late May.

History

Cominco American targeted the Shotgun prospect area in the early 1980's due to multi-element stream sediment anomalies detected in regional surveys conducted by the U.S. Geological Survey. Cominco American and Enstar Resources Corp. formed a joint venture to conduct regional tin-gold exploration in order to follow-up on U.S. Geological Survey results. What is now known as the Shotgun prospect was discovered in 1983 during follow-up of these stream sediment samples. The prospect was originally called "Mose" after the anastomosing quartz veins found at the discovery outcrop. Cominco subsequently completed grid rock sampling and mapping in 1983 and identified a large area of surface rubble-crop containing >500 ppb gold. In 1984, 154 metres (507 feet) of diamond drilling was completed in four shallow (<65 metre) holes within an area of > 1,000 ppb gold in rock. Grid-based lithogeochemical sampling expanded the area sampled to 1,300 by 900 feet and geological mapping was conducted over the area. In 1988 Cominco completed 92 metres (303 feet) of diamond drilling in two holes. The 1988 drill programme was designed to test the >1,000 ppb gold anomaly at greater depth but difficult drilling conditions and budget constraints prevented completion of the programme. In 1997,

Cominco flew a property wide aeromagnetic survey.

In 1998 NovaGold Resources purchased Enstar's 49.07% interest in 19 original Mose claims that comprised the Shotgun property. NovaGold staked an additional 38 claims surrounding the Mose claims and drilled a total of 3,107 metres (10,192 feet) of HQ core in 20 holes in the same year. Additional grid-based lithgeochemistry, soil sampling and ground based magnetic surveys were conducted over the main mineralized zone. At the end of the 1998 season, NovaGold completed a geological estimate of 32,765,175 tonnes grading 0.93 g/t gold using a 0.5 g/t grade cutoff. Work done by Rombach during the 1998 season and subsequently published (Rombach and Newberry 2001) has benefited exploration of the property not just due to the original work, but by additional review and commentary in other publication by researchers developing the intrusion-related gold deposit model (see Hart, 2007 for comprehensive overview). In 2001 NovaGold acquired the remaining interest in the 19 Mose claims on the Shotgun prospect and conveyed a 5% net profits interest on production from those 19 claims to a US subsidiary of Teck-Cominco.

In 2002, TNR Gold Corp entered an agreement with NovaGold to earn 50% interest in the property by expending US\$ 3,100,000 and issuing 1,312,500 common shares. TNR proceeded to acquire additional mineral claims over targets identified in Cominco and NovaGold work. The previous technical report (Freeman, 2004) By the end of June 2006, TNR Gold Corp had completed their required expenditure and were vested in the Shotgun property at 50%. On 16 August, 2006 TNR and NovaGold agreed to continue the exploration program at Shotgun with each participant contributing 50%.

The following table summarizes the deferred exploration expenditures on an annual basis as stated in the companies consolidated financial statements.

Year	Deferred Exploration Costs
2002	\$21,392
2003	\$525,505
2004	\$444,645
2005	\$1,644,286
2006	\$1,868,235
2007 ¹	\$87,062
total:	\$4,591,125

Geological Setting

Southwest Alaska is an area of approximately 175,000 km² ranging from lowlands, to rolling hills and rugged mountains. The area is comprised of five distinct terranes, extensive younger overlap assemblages and isolated exposures of Early Proterozoic metamorphic rocks. As with most regions dominated by accretionary units, the geological history is complex. A number of sources including Decker et al (1994) and Miller et al (2002) provide good geological overview of the area. The tectonic context of the Shotgun – Winchester area during Cretaceous and early Tertiary time was that of a back arc-basin resulting from the subduction of the Pacific Plate beneath the North American plate.

The most extensive unit in southwest Alaska is the Kuskokwim Group, a predominately Upper Cretaceous, overlap assemblage which largely rests unconformably on older terranes of the region. The Kuskokwim is described as three belts which are divided by the Iditarod-Nixon Fork and Denali-Farewell fault systems. The Shotgun Hills fall within the southern Kuskokwim belt. To the east the southern belt overthrusts the Southern Kahiltna terrane as the Mulchatna Fault. To the south, at the closest point from Shotgun along the projection of the Mulchatna and East Kulukak fault systems the trace is obscured under deep Quaternary sediments. The basement of the Kuskokwim is not known locally in many areas including the Shotgun area, which although southwest of the central and deepest parts of the Kuskokwim is still 20 to 40 km east of the nearest basement exposures of Togiak and Tikchik terranes. Given the distribution of deposits and prospects similar to Shotgun and Winchester it is not likely that the basement terrane is a primary factor influencing their location. The Kuskokwim Group consists of marine turbidites with some shallow-marine and fluvial strata. These sediments filled a southwest trending elongate basin (covering approximately 70,000 km²) which probably resulted from strike-slip tectonics in the Late Cretaceous. Sandstone and clast composition indicate that the sediment derived from local sources, and the sediments appear to have deposited quite rapidly resulting in depths of greater than 10 km in thickest parts. In proximity to intrusions Kuskokwim sediments exhibit gradational hornfels aureoles. When bedding is visible, broad open folds are most common with occasional

1 Represents the first nine months of 2007. Taken from the Consolidated Financial Statements for the Nine Month Period Ended September 30, 2007.

chevron, overturned or isoclinal folds and evidence of thrust faults.

Early Kuskokwim deposition is interpreted as being within a forearc environment which gradually closed into a non-marine basin. Last stages of Kuskokwim deposition coincided with magmatic arc activity and the beginning of volcanic-plutonic activity of which the Shotgun pluton is probably a consequence. The volcanic activity is recorded in places where volcanics overlie or are interbedded with Kuskokwim. Major- and trace-element geochemistry of the porphyry hosting the Shotgun Ridge zone suggests that it is more fractionated version of the Shotgun Hills pluton (Rombach and Newberry, 2001). Hypabyssal felsic to intermediate dykes, stocks and sills of similar age form a third type of igneous rock found in the region. These are not thought to be directly related to the plutons and can have peraluminous chemistry, garnet phenocrysts (rare occurrences are noted at Shotgun) and are presumed to be derived from melted continental crust. They can be porphyritic and are spatially associated with gold mineralization and placer occurrences. In addition, K/Ar ages for these hypabyssal rocks appear to be bimodally centred around 70 and 65 Ma. Rombach and Newberry (2001) provide an $^{40}\text{Ar}/^{39}\text{Ar}$ date of 69.7 ± 0.3 Ma for the Shotgun *granite porphyry*. At Shotgun the hypabyssal intrusives are believed to be slightly later than the Shotgun pluton.

Cretaceous – Tertiary plutonic rocks of the Kuskokwim region have geochemical characteristics typical of granites formed in volcanic arcs. These characteristics include high-K or shoshonitic series affinities, biotite $\pm$ hornblende as the dominant mafic minerals metaluminous to slightly peraluminous composition. Major and trace element data are typical of arc-related calc-alkaline igneous rocks and suggest a common source for Late Cretaceous to Early Tertiary plutonics and volcano-plutonic complexes. REE patterns in volcanic and plutonic rocks of the Kuskokwim region show a commonality that also supports a common petrogenesis for many igneous centres (Szumigala, 1995).

Regional strike-slip tectonic activity correlates with magmatism, mineralization and deformation in the Kuskokwim area during late Cretaceous time. For mineralization in the ~70 Ma group structural control through faulting is documented to play an important role. Although the sense of motion is not often known locally the main regional faults (Denali and Iditarod-Nixon Fork scale) which trend NE show dextral movement. Miller et al (2002) identified five domains of folding within their study region to the north of Shotgun. There is no reason why their results, which include observations of similar age and type deposits and prospects, cannot be extrapolated to

the Shotgun area to aid in interpretation. The fold domain associated with the ~70 Ma group (including Donlin Creek and Fortyseven Mile Creek) includes east-west oriented fold axes which suggests roughly north-south shortening. This orientation of fold axis does not appear to directly result from the orientation of strike-slip faulting while some of the other domains have more obvious relationships. Conjugate faults, thrusts and folds mapped at Donlin are consistent with N-S shortening. Current work at Shotgun and Winchester has not eliminated the possibility that folding and strike slip faulting are products of the same structural environment. Displacement along the faults at Shotgun is not known, and may vary from minor movement to 100s of metres or even kilometre scale. The possibility of a vertical component to the movement also exists. This is evident at Winchester where geochemical zonation and hornfels intensity changes across a fault suggesting that the displacement is post-mineralization and to some extent west side down. Magnetic surveys appear to show disruptions in magnetic highs surrounding intrusives that correlate with faulting, but with little or no displacement. Destruction of magnetic signatures could be due to increased hydrothermal fluid flow along faults and consequent alteration, or the magnetic signature was set after movement. Both of these effects are consistent with volcanic-plutonic activity in a concurrently active compressional domain.

The brecciated feeder zone at Shotgun Ridge is steeply SSW dipping which is roughly consistent with the fold axial plane observed at Winchester and does not rule out the possibility of both structures being due to the same event. Identification of this structure as a primary mineralization control has shifted the focus of exploration targeting from NE oriented strike slip faulting to SW oriented dilational jogs or en echelon relay systems subordinate to the regional NE oriented structures.

Consequently the inverted bowl of Fig 4 in Rombach and Newberry (2001) should be viewed as a slice through a 3D body dipping steeply out of the page toward the viewer which means that the base of the gold in the section is probably not the base of gold in the zone.

Timing and Geochronology

The following summarizes the geochronology of Shotgun. It is based largely on work by Rombach and Newberry (2001) and Freeman (2004) with adjustments to reflect the results of recent work.

1. Regional transtensional tectonism established and probably active throughout the following series of events.

2. Evidence for relative timing on the Winchester sills is currently lacking. It is not clear if they pre- or post-date Shotgun, although slightly pre-date is more likely. They are assumed to be tectonically related to Shotgun. Although they have similar geochemistry in gold and pathfinders, major element composition differs from the Shotgun Pluton.
3. Shotgun Pluton intrudes and generates much of the hornfels aureole. Although outcropping to the north of Shotgun Ridge, magnetics indicate the pluton at depth to south of the Shot prospect. Location of the pluton and associated intrusions may have been focused by high strain zones
4. As more fractionated, late-stage porphyries are emplaced, multiphase, mineralized, hydrothermal and magmatic breccias are formed focusing in transfer zones between NW strike slip structures.
5. Late stage, low temperature quartz carbonate veining contains minor gold – possibly remobilized, but are typically barren. Extensional quartz carbonate veins at Winchester are seen parallel to fold axial planes.
6. Some evidence of post mineralization (oblique?) strike slip movement on NW striking structures suggests the possibility of some telescoping of the original mineralized zones.

Pleistocene Glaciation

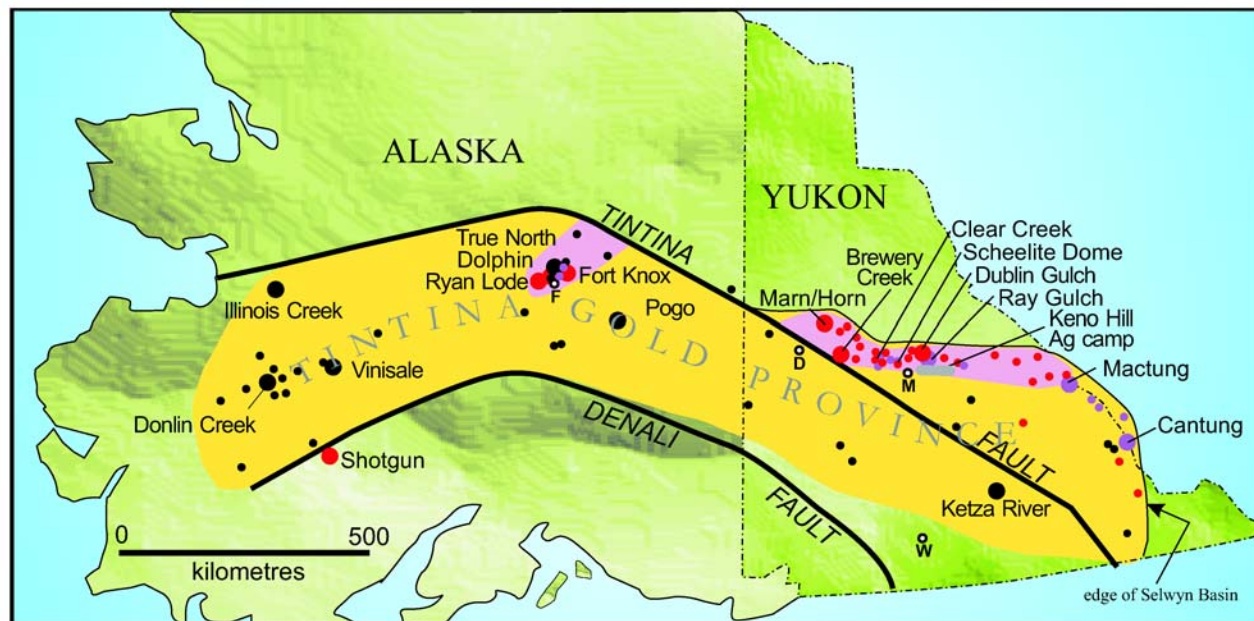
Recent compilation of the Pleistocene maximum and Late Wisconsin extent of glaciation in Alaska (Kaufman and Manley, 2004) places the Shotgun project area within the maximum, but outside the Late Wisconsin extent of glaciation. The source of ice in this area was not part of the Cordilleran Ice Sheet to the east, but from the Ahklun Mountains to the southwest. These mountains supported the only large centre of Pleistocene glaciation other than the Brooks Range ice, outside the Cordilleran Ice Sheet. Outlet glaciers to the east carved the fjord-like Tikchik lakes. Alpine glaciers in the Shotgun Hills did not extend to connect with the larger outflowing ice. While the valleys within the core of the Shotgun Hills were glaciated, it is not apparent that there was much active ice around Winchester or even King. Higher ground does not show many signs of glacially derived material while valleys contain glaciofluvial or glaciolacustrine sediments.

Deposit Types

The Shotgun and Winchester prospects are located within the Kuskokwim Mineral Belt, a regional grouping of deposits and prospects spanning over 500 km of southwestern Alaska. The belt is reported to have produced a cumulative total of 74.6 metric tonnes (2.4 million ounces) of gold (Szumigala, 1996) with significantly higher resources – approximately 25 million ounces at the Donlin Creek deposit alone (Placer Dome news release 9 April 2007). This belt itself is sometimes identified with the western extent of the Tintina gold province. Within this broad association of gold deposits and prospects there is a genetic style and age similarity underlying distinctive individual characteristics. Not all gold occurrences within the Tintina Gold Province are reduced intrusion-related. In Map 2, below, only those prospects and deposits shown in red are reduced intrusion-related. Those in black are other (possibly related) styles of gold mineralization and those in grey are W dominated and associated with reduced intrusions. Outside the Alaska-Yukon area other deposits such as Timbarra and Kidston in Australia, Salave and Rio Narcea in Spain and Mokrsko in the Czech Republic have been genetically compared to Shotgun. These and others are shown in Map 3. Those which are associated with less confidence are shown in black, grey and white while those with an reduced intrusion-related gold consensus are shown in red. Note that all members of the high confidence group fall within the Phanerozoic while there is still debate on the classification of Proterozoic and Archean examples.

A range of terminology has been used by various sources to describe the mineralization at Shotgun. Proposed models have included reference to intrusion-related (or intrusion-associated) gold, reduced-granite intrusion, thermal aureole gold (TAG), Tintina-style, Donlin Creek-style and peripheral associations have been made with Cu-Au-Mo porphyry and Sn-greisen. While existing publications could easily give the impression that the diverse terminology used to describe Shotgun mineralization suggest lack of agreement among workers, this is not at all the case. The variety of models mentioned are either more or less synonyms or they fit within a genetic spectrum. Focus of various workers may be oriented toward geochemical, structural or tectonic aspects depending on what features strongest in their respective areas of study. Several of these model approaches contribute to understanding Shotgun style mineralization. In this report the term, **reduced intrusion-related gold** is used following the usage by Hart (2007), a recent comprehensive overview paper. Examples associated with this model have global distribution and range in

age, emplacement depth and temperature, host and structural controls. The various styles seen at Shotgun and Winchester can be fitted within this model.

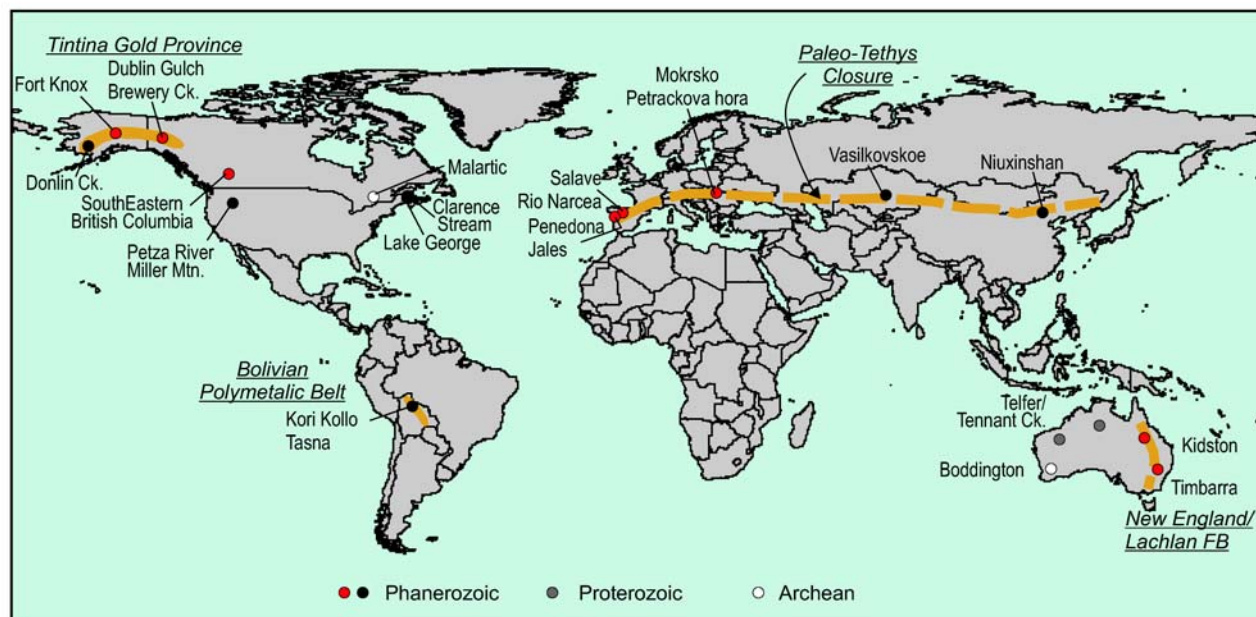


Map 2: Extended Tintina Gold Belt from Hart (2007)

Work concluded in 2003 by a large number of collaborators and coordinated by the Mineral Deposit Research Unit (MDRU) at The University of British Columbia subdivides intrusion-related gold into high level (~0 to 3 km depth) and deeper level (~4 to 9 km depth) models. The high level model was further subdivided into **reduced epithermal** or sub-epithermal and **reduced porphyry-Au** deposits. Donlin Creek falling into the former with Dome and Shotgun falling into the latter sub-model. Note that Dome is a zone within the Donlin Creek district indicating that these models can occur in quite close proximity. MDRU found that there was no continuum between ore fluid found in the deep and high level systems in the deposits examined in that study. High level deposits were found to form by different processes and have different exploration strategies (Ebert, 2003).

Work at Shotgun Ridge has found evidence of low oxidation state (due to low- fS_2 sulphide mineralogy and methane-bearing fluid inclusions), relatively low sulphide content, albite-sericite alteration, CO_2 -bearing fluid inclusions and As-Bi-Te (Rombach and Newberry, 2001). These characteristics are consistent with other Cretaceous intrusion-related gold deposits of the Kuskokwim and Tintina regions. Winchester Ridge is not developed as far as Shotgun but similar observations and

inferences can be made based on geochemical, petrographic and vein style logging work to date. Some characteristics of Shotgun Ridge such as copper values ranging from 17 to 7,700 ppm are atypical of intrusion-associated gold. Thompson et al (1999) report <100 ppm Cu as characteristic in their study. Differences between Shotgun Ridge and Winchester are within the range of district scale variation in high level intrusion-related gold prospects.



Map 3: Worldwide distribution of Intrusion Related Gold from Hart (2007)

Although some characteristics commonly associated with Cu-Au porphyry systems are present at Shotgun Ridge, there are a significant number of characteristics that are missing or differ sufficiently from the classic porphyry model to reduce the importance of this and related models on the property. Differences include the lack of chalcopyrite associated with the gold and the lack of potassic alteration. The hydrothermal magnetite found in Cu-Mo porphyry systems is not present since the fluids were reduced rather than oxidized, and the gold is strongly associated with Bi..

Geochemical signatures associated with the reduced intrusive-related gold model play an important role in exploration strategies since they can be identified in a range of sample media ranging from stream sediments to rocks. The multielement character of the signature provides both confirmation and some degree of lateral and vertical zoning within the system. Arsenic generally forms the broadest anomaly and is diagnostically supported by coincident Bi, Te and W anomalies. Although Ag is

reported to be more distal at other prospects, Shotgun seems to have anomalous Ag associated with Au mineralization. Shot has broad Ag anomalies, however no in situ Au has been located there yet. Other elements forming anomalies coincident and lateral to Au include Cu, Mo, Sb and Sn. Low Rb/Sr ratios from major element geochemistry at Winchester places the intrusives within the field of Au-Bi hosting intrusives identified in Baker and others (2005).

Tin models have indirectly had importance in the discovery of Shotgun since the original discovery was due to a Sn prospecting programme. While superficially different, the genetic relationship between the two deposit types has been established through geochemical models and the spatial association of Sn-W provinces with Au-Bi deposits is an important observation for exploration. Since the systems present at Shotgun and Winchester have been shown to fall in the Au-Bi group, further exploration for Sn-W targets in the immediate area does not seem warranted (Baker et al 2005).

Due to the range of characteristics found in reduced intrusion-related gold systems worldwide it is necessary to separate the district identification exploration criteria from those that may be used to identify drill targets or vectors to ore. Exploration models are described in Lang, (2000), Sillitoe and Thompson (1998), Thompson and Newberry (2000), Flanigan and others (2000) and Hart (2007). Spatial relationships (seen in plan view) of characteristics described by Hart in his exploration model are shown in Figure 1 below. Some characteristics have been established for the Shotgun area which identify it as a prospective region, but will probably not be able to contribute to further refinement of targeting. These include the age of the Shotgun granites, peraluminous to metaluminous composition of the granite, the reduced nature of intrusion and initial fluids and the tectonic environment is prospective. A number of phases of hypabyssal intrusives are found in the Shotgun area. Further understanding of their time and composition relationships to each other might be useful but would be relatively difficult within an exploration programme. Structural mapping of Winchester has already proved important in both interpreting results and predicting drill targets. Additional structural data and modelling may identify differences in structural control that distinguish the style of mineralization found at Shotgun and Winchester. Geophysics, which has had only subtle responses to prospective lithology, may have more productive use in identifying structural controls. Within the intrusion-associated gold model(s) there is both lateral and vertical geochemical zonation. Geochemistry, along with mapping, has been the best

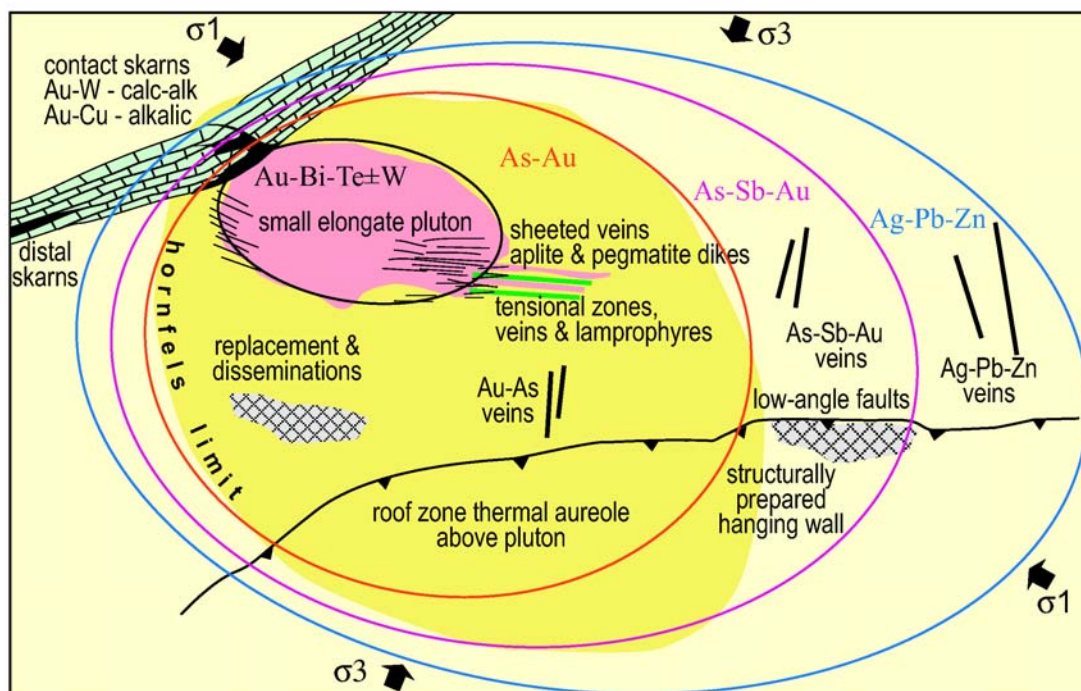


Figure 1: Intrusion Related Gold model diagram from Hart (2007)

means for developing targets at Shotgun and Winchester. This should continue to be the case. In addition to the consistent Au-Bi association seen at prospects from Shotgun to Winchester there is also variation in geochemical fingerprints that may indicate position within the model system.

The initial TNR exploration targeting focused on quartz breccia and vein style mineralization, preferably hosted in porphyry intrusive of granitic or rhyolitic composition. Subsequent to the discovery of gold-bearing latite sills at Winchester, targeting was expanded to project known sills along Winchester Ridge using structural data. In addition, it was realized that sources of gold may have been missed while prospecting King and Shot. Comprehensive revisiting of these prospects has not occurred since the discovery and early development of Winchester.

Mineralization

The two principle areas of known mineralization are at the northern and southern extents of the property – Shotgun Ridge and Winchester Ridge respectively, approximately 17 km distant. Some areas between them, notably those referred to as Shot and King have produced geochemically significant samples in stream sediment, soil and rock media. In spite of these encouraging indications, no significant

mineralized sources have yet been identified. However, it should be stressed that neither of these areas have been revisited for systematic prospecting since the discovery of gold-bearing sills at Winchester or the structural reinterpretation of Shotgun Ridge. In addition, the focus of work at Winchester has been at the eastern end of the ridge where soil and talus sampling density is highest. Geochemical gold anomalies have been found in other areas of the ridge spanning 8.5 km roughly east-west. Selective mapping and prospecting of the central and western parts of Winchester was conducted during a site visit in August 2007. While additional sills, some strongly silicified with disseminated arsenopyrite were located, no assays returned significant gold values.



Figure 2: Intense brecciation textures at approx 100m in DDH06-43.

At Shotgun Ridge mineralization is hosted in a roughly triangular body of granite porphyry. This body is thought to pinch to the northeast and southwest into 5 to 10 m wide dykes oriented parallel to other dykes which are subparallel to regionally extensive right-lateral strike slip faults. Quartz stockwork, breccias and veins are visually striking on the ridge where they form the primary ore-bearing unit. Veining diminishes rapidly on contact with the Kuskokwim sediments (hornfels) but persists far enough to result in some significant gold values being returned by sedimentary DDH sample intervals. (At Winchester Ridge some Kuskokwim float samples have been found to carry significant gold values, but this has been found less frequently at Shotgun Ridge.) Brecciation can be very intense and is multiphase as evidenced by breccia fragments in subsequent breccias. Breccia ranges from widely matrix supported clasts to crackle breccias with fine interlaced quartz veins and fragments showing no rotation and essentially no displacement. Cross-cutting quartz veins sometimes appear to be sheeted sets, but lack of orientation due to sparse outcrop and

non-oriented core prevents conclusions about the orientation of sheeted vein sets. Intervals of several metres with massive quartz veins are encountered although it can be difficult to determine if any of the interval is intensely bleached and silicified ($\pm$ albitized) granite porphyry.

Although the Shotgun prospect shares many of the chemical and physical characteristics of other occurrences in the Tintina and Kuskokwim belts, it also displays unique characteristics more commonly observed in classic copper-gold porphyries (Rombach and Newberry, 2001). These characteristics include polyphase stockwork breccias, high salinity liquid-filled fluid inclusions, explosive volatile release and high levels of copper and molybdenum. Despite these similarities to porphyry copper-gold deposits, the Shotgun prospect differs from copper gold porphyries in several important ways, including lack of potassic alteration, lack of a strong physical and statistical copper – gold correlation, low sulphur content, lack of hydrothermal magnetite, association of gold with Te and Bi and the presence of vapor-phase fluid inclusions containing high CO₂ contents (Rombach and Newberry, 2001).

Evidence from Rombach and Newberry (2001) suggests the Shotgun prospect formed over temperatures ranging from $>600^{\circ}\text{C}$ to less than 300°C at depths typical for porphyry copper-gold systems but well above those typical for intrusive-related gold systems in the Tintina Gold Belt and Kuskokwim Mineral Belt. The prospect also differs from most other gold prospects in the Kuskokwim Mineral belt because it is located on the south side of the Denali Farewell fault system (see Map 2). Movement on this fault system is significant with a right lateral offset of >350 km on the Denali strand and >140 km on the Farewell strand. Initial motion on these faults is probably post-55 Ma and suggests that rocks on the southern side of these structures may expose higher levels of volcanoplutonic complexes than are common on the northwest side of the fault. Evidence from other similarly positioned gold prospects such as the Golden Zone prospect in the central Alaska Range supports this conclusion. In summary the Shotgun-Winchester prospects represents a gold occurrence which in places exhibits some characteristics of porphyry copper-gold systems but is better classified by the more recently defined reduced intrusive-related gold systems.

Breccias in the Kuskokwim are often partially clast supported with quartz $\pm$ tourmaline and occasionally only tourmaline forming the cement. Quartz $\pm$ tourmaline and tourmaline veins and breccias are often geochemically anomalous in

gold throughout the property. Tourmaline is also seen, particularly in the Shot area, forming bands or replacement veins in Kuskokwim sediments. In places these alternate with quartz giving characteristic black and white striping. Tourmaline is rarely seen within veins or breccia hosted in porphyry intrusives but more commonly in veins at Winchester. Crosscutting vein relationships suggest that a late stage set of extensional quartz $\pm$ tourmaline $\pm$ calcite veins cuts (smaller?) porphyry intrusions. These late veins do not seem to be included in the paragenesis by Rombach and Newberry (2001) and may not be represented in the Shotgun Ridge zone. They have been identified at Winchester and possibly King, and in the rare instances are found in outcrop where they are oriented roughly parallel to the interpreted fold axial plane. Lack of data on bedding and folding in the Shotgun Ridge area may be due to more massive Kuskokwim sediments or destruction of bedding traces by hornfels. The latter has not been the case elsewhere on the property and further mapping around Shotgun Ridge with particular focus on collecting structural data may be productive. Although these late stage veins are geochemically anomalous in gold, it is possible that the gold did not originate with the vein but has been remobilized from the gold bearing sills.

	Early				Late
Sulphide assemblages	asp+po+cpy $\pm$ cb $\pm$ bn	asp+po+cpy, cpy+bn	py+asp+cpy $\pm$ spl	py+cpy $\pm$ bn $\pm$ spl	none
Alteration assemblage (plus qtz vein)	albite $\pm$ tour (biotite, K-spar)	albite $\pm$ sericite $\pm$ (rutile $\pm$ tour $\pm$ chlorite)	sericite $\pm$ carb ($\pm$ rutile)	sericite $\pm$ carb	calcite
Gold assemblage	Au ⁰ +Bi-Te, Au ₂ Bi	Au-Ag ⁰ +Bi ₂ S ₂ $\pm$ Bi-Te sx	Au-Ag ⁰ +Bi ₂ S ₂	?	none?
Vein styles	veinlet, disseminated	vein, veinlet, breccia	vein	vein	veinlet
Gold occurrence	inclusions in arsenopyrite	isolated grains	?	?	?
Approximate temp range	>500°C	400 to 500°C	350 to 400°C	<350°C	?

Table 2: Generalized paragenesis for Shotgun Ridge from Rombach and Newberry (2001).

Examination of the least-altered granite porphyry indicates that it is composed of 1 to 5 mm long quartz, orthoclase, and plagioclase phenocrysts in roughly equal proportions and approximately 5% biotite in a light-coloured aphanitic groundmass of

quartz and feldspar. Age dates ($^{40}\text{Ar}/^{39}\text{Ar}$) from biotite from this rock type are 69.7 ± 0.3 Ma and whole rock chemical compositions average 75% SiO_2 , 3.4-3.8% Na_2O and 4.4% K_2O . Least-altered granite porphyry from the Shotgun Ridge prospect and unaltered granitic rock from the Shotgun Hills pluton suggest that the Shotgun granite porphyry is a more highly fractionated end-member of the Shotgun Hills pluton. Age dates ($^{40}\text{Ar}/^{39}\text{Ar}$) from biotite from the Shotgun Hills pluton are 68.7 ± 0.2 Ma suggesting this larger intrusive cooled more slowly than the Shotgun granite porphyry. As in other gold systems in the Kuskokwim Mineral Belt, Rb, Y, and Nb values at Shotgun are typical of subduction-related volcanic arc granites. Several lines of evidence indicate that the Shotgun granite porphyry and the Shotgun Hills pluton are ilmenite series I-type granitoids: 1) hornblende is a minor component of the Shotgun Hills pluton, 2) magmatic peraluminous indicator minerals are absent from the Shotgun granite porphyry and 3) both the Shotgun granite porphyry and the Shotgun Hills pluton exhibit low to very low magnetic susceptibilities.

The most obvious form of hydrothermal activity at Shotgun Ridge is multiphase quartz stockwork veining and the associated intense quartz-albite±sericite±carbonate alteration. The veins vary from 0.1 to 5 cm wide but can form quartz veins up to 2 m wide or wider although intense bleaching of host porphyry can obscure the margins of the vein or where it blends into breccia. Quartz vein density is highest in the Shotgun granite porphyry and diminishes rapidly in adjacent hornfels. Silica flooding is present locally and often leaves only the specific phenocrysts unaltered. Gold mineralization is hosted primarily within the granite porphyry and in adjacent hornfelsic sediments. Although intense quartz veining normally is a positive indicator of gold mineralization, there is a statistically poor correlation between gold grade and weight percent silica in a given sample (Rombach and Newberry, 2001). A similar situation exists between arsenic and gold levels: the presence of arsenic is a good indicator that an area has been affected by hydrothermal alteration however the gold to arsenic correlation coefficient is only 0.26 indicating arsenic is not uniquely related to gold. Multi-phase introduction of quartz veins and arsenic-bearing sulphides explains both of these relationships and is in agreement with petrographic and textural relationships noted on the prospect.

While widespread and abundant at Shotgun, albitic alteration is difficult to quantify in the field because of its fine-grained nature. Feldspar staining shows that potassic alteration is virtually absent. Albitic alteration varies from a complete conversion of groundmass feldspars to in albite selvages 0.5- to 5 cm-wide to a weak pervasive

alteration of aphanitic feldspars. Evidence from major-oxide analyses, staining and petrography indicate that albitic alteration is restricted to the Shotgun granite porphyry and extends to at least 150 meters below surface. X-ray fluorescence (XRF) analyses of albite altered rocks suggest gold grades are directly related to the intensity of albitic alteration (Rombach and Newberry, 2001).

An irregular shaped zone of intense sericite alteration overlaps the upper zone of albitic alteration. This type of alteration is most common along quartz vein selvages and in adjacent wall rocks where biotite is altered to sericite-rutile±sulphides and feldspar is altered to sericite + carbonate. Groundmass feldspars often are more intensely altered than feldspar phenocrysts.

Tourmaline-quartz and carbonate-quartz veins are typically found at the margins of the known sulphide mineralization in later, lower temperature alteration zones. Poorly formed sub-millimetre tourmaline grains occur locally in quartz veins with albite-sericite-chlorite. Rare, 1 to 15 mm-wide massive tourmaline-sulphide veins of uncertain age occur sporadically in the granite porphyry. Carbonate alteration occurs in very minor amounts as sub-millimetre grains within quartz veins, especially with sericite-chlorite. Some fractures and veins have a <1 to 3 mm thick carbonate coating, most likely due to very late stage alteration.

Hypogene metallic mineralization at the Shotgun prospect consists of variable amounts of native gold, arsenopyrite, native bismuth, Bi-Te sulphides, bornite, chalcopyrite, cubanite, loellingite, maldonite, pyrrhotite, pyrite, scheelite and sphalerite (Rombach and Newberry, 2001). Sulphide mineralization is hosted primarily within or immediately adjacent to quartz veins. Within the granite porphyry host rocks, the sulphide content averages 1-2% total sulphides with local enrichment of up to 10%.

Supergene minerals occur within the granite porphyry at Shotgun Ridge and include scorodite, bornite, malachite, and native copper typically along quartz-tourmaline veins. These veins occur at the surface and at shallow depths in drill holes. Iron oxides occur within cataclastic zones throughout the deposit but this makes up a very small percentage of the rock volume. Overall very little oxidation has taken place and supergene mineralization is minimal. This observation is consistent with the fact that Shotgun Ridge was glaciated during Quaternary time.

Although mineralization at Winchester shares much in common with the geochemical signature at Shotgun Ridge, the style is quite distinct. Gold mineralization is found in



Figure 3: Gold bearing latite sill in DDH 06-45 at 201m. Logged as lgi - light grey intrusive.

medium grained, typically equigranular, medium grey sills of latite composition. In deeper holes this unit starts to take on porphyry texture and gold grades continue for at least some distance after this textural change. Veining is much less common than at Shotgun Ridge and veining intensity does not appear to directly correlate with gold. Subsequently brecciation is much less common at Winchester but when found in hornfels adjacent to or between sills it can be a prospective indicator for gold mineralization. Sills with little or no veining can return significant gold values and petrography of these intervals has not yet provided evidence of microveining. Some more porphyritic units at Winchester have intervals that are strongly geochemically anomalous in gold, but with no clear indication of a later intrusion within the porphyry. When multiple sills are separated by hornfels intervals, gold grades are often continuous through the hornfels or at least penetrate partially through the interval. The presence of arsenopyrite is often a good indicator of gold, although sills with abundant arsenopyrite are also known to have no significant gold. Tourmaline is seen in various forms ranging from replacement veins to crystals with drusy quartz in extensional veins. Quartz-tourmaline veins in hornfelsic Kuskokwim can have significant gold grades. These are assumed to be in very close spatial relationship to sills or other gold bearing intrusives, but since many of these samples are from talus float the distance to which gold bearing quartz-tourmaline veins can extend into the sediments is not well established and may be significantly more than has been observed in core. Shotgun Ridge has benefited from detailed study by Rombach. Mineralization controls at Winchester need additional study. With results from the 2006 season (many of which were not available during that season) it is possible to select a suite of samples for further studies.

Exploration

Exploration at Shotgun began as follow-up to USGS stream sediment sampling of the 1970s and minor reports of placer found along the King Salmon river south of King.

In the early 1980s regional geochemical data triggered interest in tin reconnaissance programmes. During this reconnaissance, targets prospective for gold were identified at Shotgun Ridge and Shot. Since Shotgun Ridge had veins and breccias in outcrop that were anomalous in gold, Cominco drilled six holes in 1984 and 1988. In conjunction with this further detailed reconnaissance and prospecting took place on prospects south and west of Shotgun Ridge. This included mapping, lithogeochemical grids where representative talus was collected, soil and stream sediment sampling. In 1998 NovaGold drilled an additional 20 holes on Shotgun Ridge and continued with regional work using a similar approach and methods to Cominco. Starting in 2003, TNR Gold Corp began an exploration programme to identify additional zones on the Shotgun property. Much of this was based on the programme designed by NovaGold in 1998 but not completed. Between 2003 and 2007, TNR collected and analysed 1326 soil and talus fines samples, 313 stream sediment samples, 1011 rock samples and 946 core samples.

Movement along ridges for geological mapping and prospecting is quick and effective on much of the property due to the modest ground cover and limited amount of cliffs. There is however, a scarcity of outcrop in many areas which along with the widespread talus cover significantly reduces the ability to identify bedrock lithology. Since the Kuskokwim sediments are the dominant unit, minor intrusions such as gently dipping sills are only identified on slopes by fortuitous outcrops or subcrops. In addition, the smaller intrusive units tend to be recessive which can reduce their likelihood to form outcrops even along ridges. The recessive characteristic may be used to locate where sills or dykes cross ridges by careful inspection of subtle depressions along ridges. Many of these ridge-top depressions in the area being drilled at Winchester are caused by recessive sills. The use of structural data to predict the position of these sills along the ridge and in core has worked well over 100m scale distances but talus cover usually made confirmation difficult over greater distances.

Exploration conducted from 1983 through 1998 defined a broad zone of anomalous gold and gold-pathfinder mineralization believed at the time to be controlled by east and northeast trending structures. Quartz veining and brittle fractures are subvertical and were reported to cluster in two trends, 055 and 090. Granite porphyry dikes are preferentially oriented northeast however examples of northwest and north-south striking dikes have been observed. Shearing along the 055 trend is accompanied by development of northwest trending joints, veining and at Shotgun Ridge quartz

breccias and feeder zones. Both of these orientations probably are the result of right-lateral, strike-slip faulting. This strike and sense of motion are consistent with the regional tectonic setting between the Holitna-Farewell-Denali and Mulchatna fault systems.

Both hydrothermal and magmatic breccias have been recognized at Shotgun. Hydrothermal breccias occur primarily within the hornfels zones adjacent to the Shotgun granite porphyry stock. These breccias are clast-supported and composed of 0.5 to 10 cm-long clasts of hornfels, granite porphyry or both, cemented by tourmaline and quartz. More intense fault breccias contain clay±sericite alteration (fault gouge) or polyphase silica flooding.

During the Comonco and NovaGold mapping hydrothermal hornfels breccias were been located up to 2 km from the Shotgun prospect suggesting the possible presence of a larger magmatic – hydrothermal system than previously recognized. This interpretation was subsequently confirmed by airborne geophysics that indicated the Shotgun Pluton continues at moderately shallow depth south of Shotgun Ridge to at least the south edge of the Shot prospect. Magmatic breccias at Shotgun normally are confined to the Shotgun granite porphyry or to adjacent hornfels. Magmatic breccias consist of rounded to angular clasts of quartz veined granite porphyry and minor hornfels in a matrix of granite porphyry. Clast sizes range from 0.5 to 10 cm and later quartz veins commonly cut the granite porphyry matrix, indicating multiple magmatic - hydrothermal events. Most magmatic breccias can be characterized as matrix-supported breccias.

Geochemistry

Geochemistry has played an important role in the discovery and interpretation of Shotgun Ridge and Winchester. It will undoubtedly continue to be useful at both the reconnaissance level (much of western Winchester has quite low sampling density to date) and in developing vectors to ore by identifying lateral and vertical zonation.

Interpretation of geochemical data has attempted to use a combination of elements that make up the mineralization signature for confirmation in identifying targets. Effects of glaciation have been minor in the areas of most geochemical surveys to date. Upper valleys have experienced alpine glaciation and transportation of materials has been minimal. The drill purchased by TNR for Shotgun is capable of power auger drilling for basal till and bedrock sampling. However, although its ability to auger drill was successfully tested in 2005 in the valley north of Shot, it has

been too busy on core drilling to afford any time on testing areas of deep overburden. Existing geochemical surveys have focused on ridges and slopes with very little in valleys or on deep overburden. The stream sediment surveys studied appear to indicate that for different pathfinder elements there is a range in distances downstream that anomalies can be identified. Gold and Bi may not be anomalous in less than 1 km downstream from the source, while As and Ag seem to be detected further. This is not surprising considering the areal extent of their respective surface anomalies and their relative strength. Consequently, some sample sites may be blind with respect to gold and bismuth anomalies higher in their watershed. Subtle Ag and As anomalies can survive downstream past Au and Bi.

There are a number of unexplained Au in soils, rocks and stream sediments spread around the prospects. A few Au in talus anomalies were found northwest of the Shotgun Ridge zone in locations that cannot be explained as dispersion from known mineralization. One of the better Au in stream sediment anomalies is located draining westward from Shot. Although Shot has produced multielement pathfinder anomalies, no significant gold has been located in outcrop or core. King has also produced some good values in talus that have not been explained. In addition, USGS water sampling from a seep on the eastern flank of King found particularly low pH and high TDS. Although there are areas at Shotgun still that have low sampling density with conventional methods, further geochemical surveys will soon need to deal with methods that will work through deeper overburden. This could include auger drilling (subject to drill availability), selective extraction methods such as Na pyrophosphate in appropriate valleys and paste pH. The latter is a relatively low cost method with immediate results and should be combined at least as an orientation survey with other methods.

Elements found in the geochemical signature of mineralization at Shotgun and Winchester have been described elsewhere in this report. Published literature on reduced intrusion-related gold systems frequently discusses correlation between various elements and Au. While various interesting and useful patterns have come out of this work, there are several pitfalls that should be avoided when working with the geochemical data at Shotgun. Scatter plots were found to be much more robust when looking for trends and relationships in data. For example, Au and Bi scatter plots of data from Winchester showed two linear trends. This may indicate to sets of mineralization – one with a Bi-Au mineral and the other where Au is more independent and found in areas of low Bi values. Correlation coefficients such as r^2

will not work well at summarizing or detecting this pattern. There is enough difference between the mineralization at Shotgun and Winchester that data for these areas should be separated for scatter plots and correlations or mixing of populations may hide trends in a blur of data. Detailed review of the geochemical database is beyond the scope of this report, but within the exploration models and property data there is sufficient indication of geochemical patterns that a careful review is warranted in the compilation leading up to the next field season.

Geophysics

Airborne and ground magnetics surveys were used by Cominco and although the resulting products exist in the GIS database, TNR does not have the details of the surveys or the original data. The exploration model, and recommendations based on experience on similar targets, suggested that relative magnetic lows could be used for targeting. This was in part based on the concept that the intrusions would have lower magnetic signature than the surrounding hornfels. The Cominco magnetics data seemed to support this model, but was of quite limited extent, only covering from the southern contact of the Shotgun Pluton to the southern end of Shot. In September 2003, TNR commissioned Fugro Airborne Surveys to conduct 11,060 line-kilometres of high resolution aeromagnetic survey. The survey was flown with a nominal survey height of 120m agl with 500m line spacing using equipment and crew based out of Bethel. However, due to weather conditions (complicated in part by the difficulty of predicting weather conditions at Shotgun from Bethel) and strong diurnal activity only 9,223 line-kilometres were completed within the budget which unfortunately left holes in the survey over critical target areas.

In December 2004, TNR Gold Corp commissioned McPhar Geosurveys Ltd to complete the previous survey and add infill lines at 167m spacing in areas of greater interest. Although the survey was completed by mid-April difficulties in merging and levelling the data persisted and map products were not ready for the 2005 field season. Causes of the difficulties were thought to be due to variation in survey elevations (even though the nominal elevation was the same in both surveys) which was caused by different weather conditions and pilots. In addition, data processing techniques at Fugro and McPhar differ resulting in quantitatively different results. When the two surveys were merged, significant striping in some areas made interpretation of subtle feature difficult in colour plan maps.

The greatest value of new geophysical surveys to date has been in developing

regional targets by identifying changes in lithological domain, curvi-linear features interpreted as regional structural traces and improving our understanding of the extent of the Shotgun Pluton at depth and similar intrusive bodies. The identification of specific subtle magnetic lows was not sufficiently diagnostic to be of assistance in defining a manageably small number of targets. Ring shaped relative highs are present at several scales and suggest that intrusive bodies of a significant range in scales are able to generate similar effects. Rings also show traces of linear shaped disruptions of the magnetic signature which in at least some cases probably reflect structural features. Very little displacement is observed in relative magnetic highs across these inferred structures. Larger scale displacements are possible, but ambiguous and will require further geological field evidence before they can be interpreted with confidence. The shape and style of magnetic signatures at Shotgun, King and Winchester may indicate the level at which plutons are exposed or masked. Based on the magnetic signatures, King and Winchester appear to be distinct from Shot and Shotgun Ridge.

Shot and King

Shot has possibly the strongest suite of pathfinder elements, but without the gold levels seen elsewhere when these levels are encountered. Gold has been encountered in sediments of streams draining from Shot. Magnetic signatures (from Cominco work) show an oval trace possibly outlining an intrusive body. Breaks in the oval trace line up like structural features and suggest that some parts of Shot where pathfinder elements are found coincide with structural intersections. All of this sounds prospective, but no success has yet resulted from exploration. Can the high level intrusion-associated gold model explain how strong pathfinder signatures can be present without gold? If so, can we discriminate where else this condition does and does not occur? Was previous exploration too focused on the style of mineralization found at Shotgun ridge, and potentially missed dykes or sills of the medium grained grey latite?

King has several prospective locations ranging from the northeast flank to one of the spurs on the south side of the mountain. A (late stage?) quartz vein crosses this spur which seems to have stronger hornfels and quartz breccia at its core. Mapping, prospecting and sampling in 2007 found a number of breccia samples that ran significant gold ($>1,000$ ppb Au). Since outcrops of vein and breccia are located on the spur this site is ready for a prospecting drill test to test the width and grade of the

breccia at modest depth.

Drilling

By the end of 2004, the short supply of diamond drilling equipment as well as drillers in Alaska, motivated TNR to evaluate the possibility of purchasing their own drill. This would enable TNR to have better control of availability during the short Alaska drilling season. Consequently, during the winter of 2004/5, TNR commissioned the fabrication of a purpose built, hydraulic, wire-line drill that could be moved by a Robinson R44 helicopter, capable of reaching approximately 200m with BQW size core and that could also act as a power auger for testing till. The drill



Figure 4: Pioneer drill operating at Winchester in 2006.

was mounted on a trailer that could be moved behind an ATV. The portability and small footprint of the drill made it an appropriate design for prospecting applications where targets of up to 200m down-hole depth were being tested. The machine was operated by crews consisting of drillers with experience on similar equipment built by the manufacturer, and driller's helpers coming from a variety of sources including local villages. This drill has now been operated for two seasons on the Shotgun property and has proved to be capable of its intended task. To date all drilling conducted on the Winchester prospect has been done with this unit. Drilling in the Shot and King area has also been entirely with this drill.

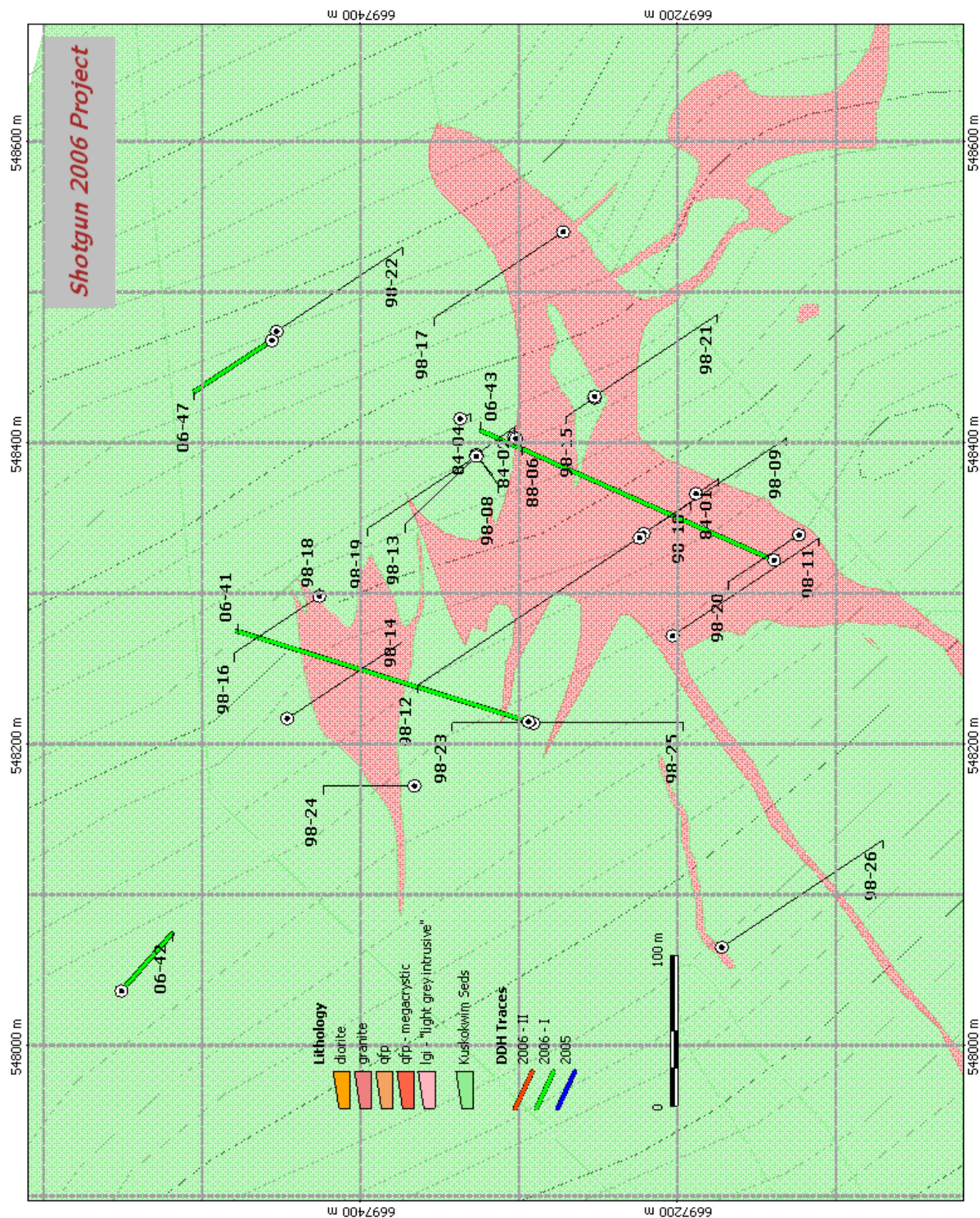
Shotgun Ridge

Shotgun Ridge was the sole focus of diamond drilling on Shotgun property during the

period of Cominco and NovaGold exploration. TNR exploration programmes tended to focus on identification of new zones and consequently limited drilling took place on Shotgun Ridge. TNR did drill Shotgun Ridge during the 2006 field season with three holes designed to test northwest and northeast extensions to the known zone and one hole testing grade continuity between the fences drilled by previous programmes.

Operator	Year	Drilling
Cominco	1984, 88	226 m
NovaGold	1998	3,107 m
TNR	2006	762 m
total:		4,095 m

Table 3: Summary of drilling at Shotgun Ridge from 1984 to 2006



Hole	From (m)	To (m)	EOH	Width (m)	Au g/t
84-02	2.3	61.5	yes	59.2	1.06
84-03	1.7	31.6	yes	29.9	2.40
88-05	9.1	78.3	yes	69.2	1.17
88-06	4.6	14.0	yes	9.4	1.34
98-07	0.0	71.0		71.0	2.19
98-08	0.0	48.8	yes	48.8	2.53
98-09	3.5	125.0		121.5	1.41
98-10	2.0	73.5		71.5	1.24
98-11	0.0	4.5		4.5	1.53
98-12	0.0	48.0		48.0	1.59
98-12	134.0	164.5		30.5	1.10
98-13	8.0	26.5		18.5	1.16
98-13	60.0	117.0		57.0	1.50
98-13	136.0	151.0		15.0	3.44
98-14	76.3	124.5	yes	48.2	1.10
98-15	37.0	43.0		6.0	1.23
98-15	77.0	83.0		6.0	2.24
98-18	30.0	122.8	yes	92.8	1.48
98-19	0.0	13.0		13.0	4.39
98-19	0.0	89.0		89.0	1.87
98-20	0.0	12.0		12.0	1.40
98-23	121.9	149.9	yes	28.0	1.33

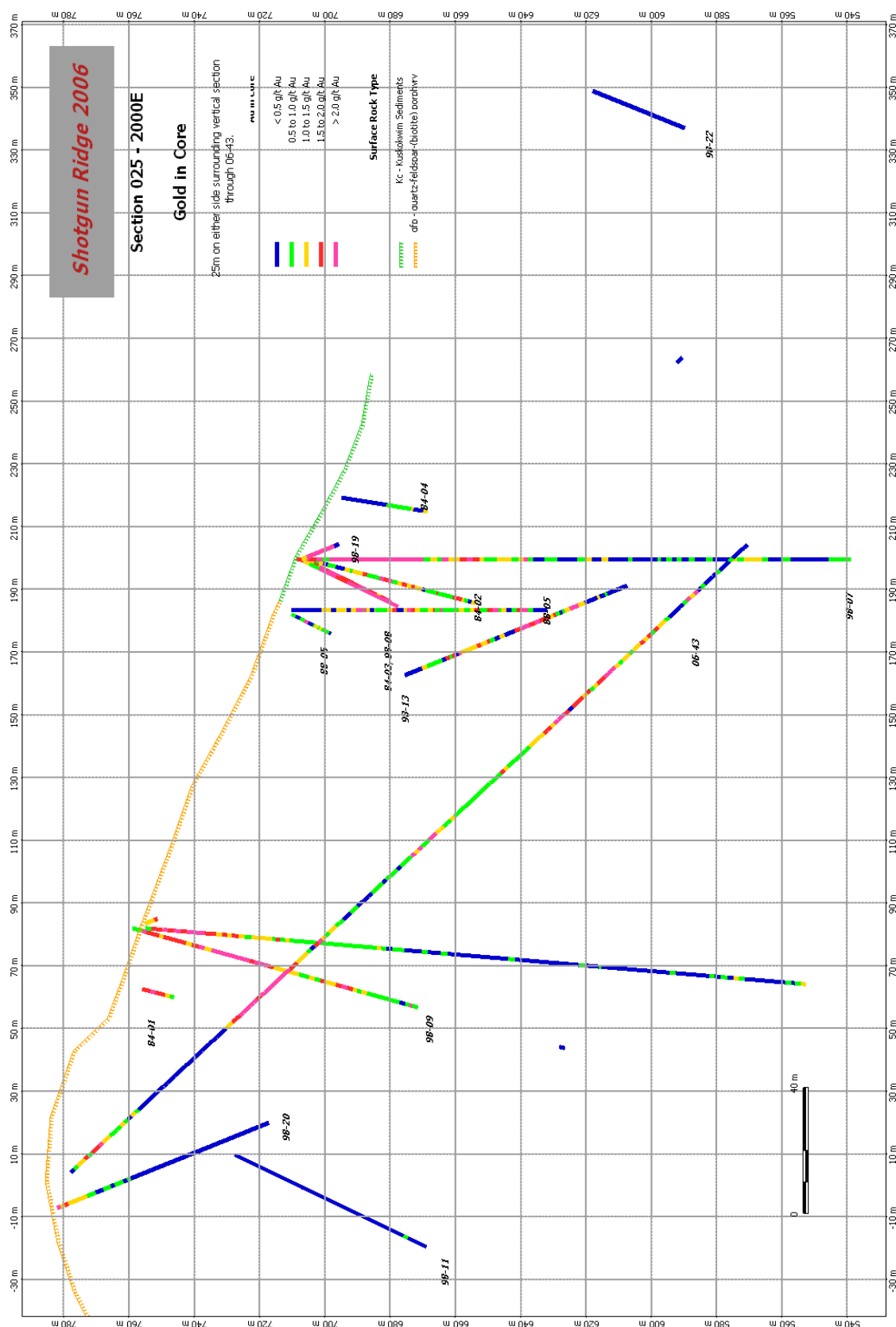
Table 4: Significant drill intercepts (>1.0 g/t Au) at Shotgun Ridge (Cominco and NovaGold).

In Table 4 intercepts that run to the end of hole are indicated in the EOH column.

Hole	From (m)	To (m)	Width (m)	Au g/t
06-43	7.3	34.7	27.4	1.18
06-43	71.8	282.2	210.5	1.29

Table 5: Significant drill intercepts at Shotgun Ridge from 2006 TNR work.

The most significant new results from TNR drilling on Shotgun Ridge came from hole 06-43 which was oriented at 025 (dipping -46) to test between the two drilling fences which are oriented at 145. This hole produced 210.5m of 1.29 g/t gold (this includes two 6.1m intervals grading <0.5 g/t Au). Of particular importance was the indication of two zones dipping steeply to the SW which are currently open at depth. Consequently, the previous interpretation of an 055 structure being the primary orientation of interest has been revised. While the 055 structures are clearly important, it is now thought that 055 structures were also active late and can host late-stage, barren veins. Steeply southwest dipping 140 structures are potentially extensional structures and important exploration targets. The strike orientation of this structure is probably sub-parallel to the ridge line, however it is not too well constrained by current data due to the majority of drilling being sub-parallel to strike. Two previously published sections oriented along 145 appear to intersect separate, parallel zones which consequently give the impression of a base elevation to the mineralized zone. When viewed along 025 with new data from 06-43 the base of



mineralization is no longer constrained and is open at depth. In addition, intended step out holes will not have been oriented optimally to intersect steeply dipping NW oriented breccia structures. Review of core logs to identify where 055 structures were intersected could help develop models for predicting additional NW oriented breccia structures. With the revised interpretation, 055 structures may not be well mineralized and still provide significant data for predictive modelling.

Three TNR holes (06-41, 42 and 47) testing for extensions were not successful. The lack of intrusive and mineralized intersections in 06-41 was surprising given logging data from previous drilling. This abrupt edge of the mineralization may be explained by the revised structural interpretation and a review of core logs may identify previously unrecognized targeting features. In hindsight, hole 06-42 was poorly oriented to hit a SW dipping structure and hole 06-47 attempted to intersect an extension orientation that is no longer predicted by the revised structural model. Given the new structural information from hole 06-43 and surface mapping at Winchester this result is consistent with syndepositional to late, right lateral displacement structures terminating the Shotgun Ridge zone. Offset breccias could be targeted using detailed geochemical and structural methods.

Winchester

Following the recognition of gold-bearing sills, 45% of the Winchester drilling (750m out of the total 1,653m) focused on developing a geological section through the ridge at Winchester. This section in conjunction with surface mapping substantially improved the geological model of Winchester and subsequently that of Shotgun Ridge and Winchester as a whole.

Operator	Year/Phase	Drilling
TNR	2005	535 m
TNR	2006-I	450 m
TNR	2006-II	668 m
total:		1,653 m

Table 6: Summary of drilling at Winchester in 2005 and 2006

All widths in the following table are drill widths. True width varies from 70 to 95% of the apparent width. The angle to core axis of upper and lower contacts were frequently not clear. In addition, short wavelength folding has been seen in outcrop

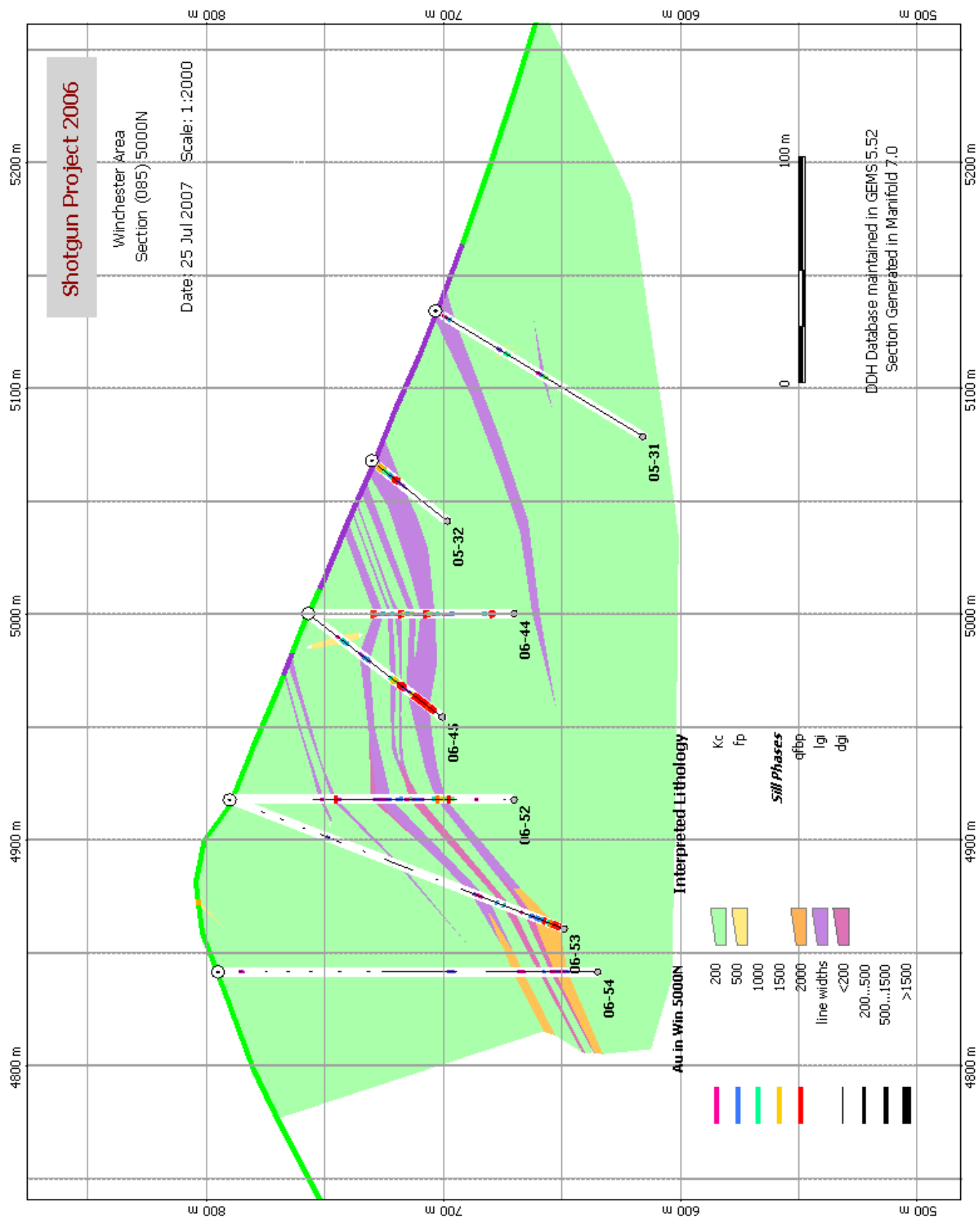
which if encountered in core may complicate interpretation of true width. The section shown in Map 6 shows how folding, drill intercepts and sill orientation is currently understood and as such has guided inferences about true thickness. Significant intervals without a specific area are off the 085 section and are stating to test the extent of mineralization along the axis of the ridge.

Hole	From (m)	To (m)	Width (m)	Au g/t	Area
05-28	15.9	22.0	6.1	0.52	Saddle
05-30	4.6	9.1	4.6	0.63	Saddle
05-31	6.1	9.0	2.9	0.49	Sec 085
05-31	34.9	36.0	2.3	1.03	Sec 085
05-31	53.6	56.5	2.9	0.94	Sec 085
05-32	3.1	17.4	14.3	1.61	Sec 085
05-33	4.6	10.4	5.8	0.48	
06-44	26.2	32.8	6.6	0.85	Sec 085
06-44	33.4	35.8	2.4	0.81	Sec 085
06-44	38.1	54.9	16.8	1.07	Sec 085
06-45	18.0	21.3	3.3	0.80	Sec 085
06-45	27.9	34.0	6.1	0.46	Sec 085
06-45	45.0	68.6	23.6	1.90	Sec 085
06-46	29.1	30.3	1.2	1.19	
06-46	32.2	32.8	0.6	2.06	
06-46	43.0	44.5	1.5	0.78	
06-46	68.9	70.4	1.5	2.16	
06-46	76.8	78.6	1.8	1.71	
06-48	20.4	21.9	1.5	1.18	
06-48	37.2	38.7	1.5	0.62	
06-49	61.5	64.6	3.1	0.58	
06-49	72.2	78.6	6.4	0.66	
06-49	80.2	85.8	5.6	0.44	
06-49	91.4	95.6	4.2	1.06	
06-50	4.6	16.8	12.2	1.40	
06-51	68.0	70.7	2.7	0.96	
06-51	82.7	85.2	2.5	0.64	
06-51	87.5	90.0	2.5	0.95	
06-51	126.7	130.8	4.1	0.80	
06-52	44.2	45.4	1.2	9.81	Sec 085
06-52	70.0	72.9	2.9	0.54	Sec 085
06-52	75.5	80.6	5.1	0.62	Sec 085
06-52	75.5	76.8	1.3	1.20	Sec 085
06-52	85.3	94.5	9.2	1.96	Sec 085
06-52	91.4	93.0	1.6	5.08	Sec 085
06-53	77.7	81.7	4.0	1.14	Sec 085
06-53	77.7	79.0	1.3	2.83	Sec 085
06-53	129.5	134.1	4.6	0.54	Sec 085
06-53	146.0	159.4	13.4	1.22	Sec 085
06-53	152.4	159.4	7.0	1.85	Sec 085
06-54	124.2	129.2	5.0	0.20	Sec 085
06-54	136.9	137.7	0.8	0.48	Sec 085
06-54	140.2	148.0	7.8	0.32	Sec 085

Table 7: Significant drill intercepts at Winchester Ridge from 2005 and 2006 TNR work.

Map 6, below, shows the lithology and gold grade ranges from the seven holes used to construct the section. Along the crest of the ridge, sparse outcrop data in conjunction with the drill results was used to create the open folding that currently provides the best interpretation of how the gold bearing sills connect. The current interpretation appears to be quite good at predicting sill location which was subsequently confirmed by subcrop mapping and drill intercepts off section. On sidehills where outcrops are scarce the estimated width of the sill can be exaggerated by several adjacent sills giving the impression in float of a single, thicker sill. (See the section through Winchester in comparison to the surface geology map.) At depth in the western (left-hand) end of the section, equigranular sills grade into a more porphyritic phase. Initially at least, the gold grade continues past the textural change indicating that the grey, equigranular phase may not be the only one to host gold mineralization. The increase in porphyry texture may suggest a direction toward the centre of the intrusive system, although magnetic data does not appear to provide any support. The possibility that gold zones are present within more massive porphyries is supported by results from the saddle area. Based on current drilling at Winchester, an area of 300m by 550m has been outlined where gold bearing sills with intercepts grading 0.5 g/t or better have been encountered. In addition, a further 650m to the SE, two holes have intercepted 0.52 and 0.63 g/t gold. Although it is not clear if or how the gold bearing units are continuous over this distance, there is drill supported potential for some continuity over 1 km. A prospective surface strike length of 2,100m is based on a combination of drilling, surface talus and soil sampling, alteration mapping and structural mapping.

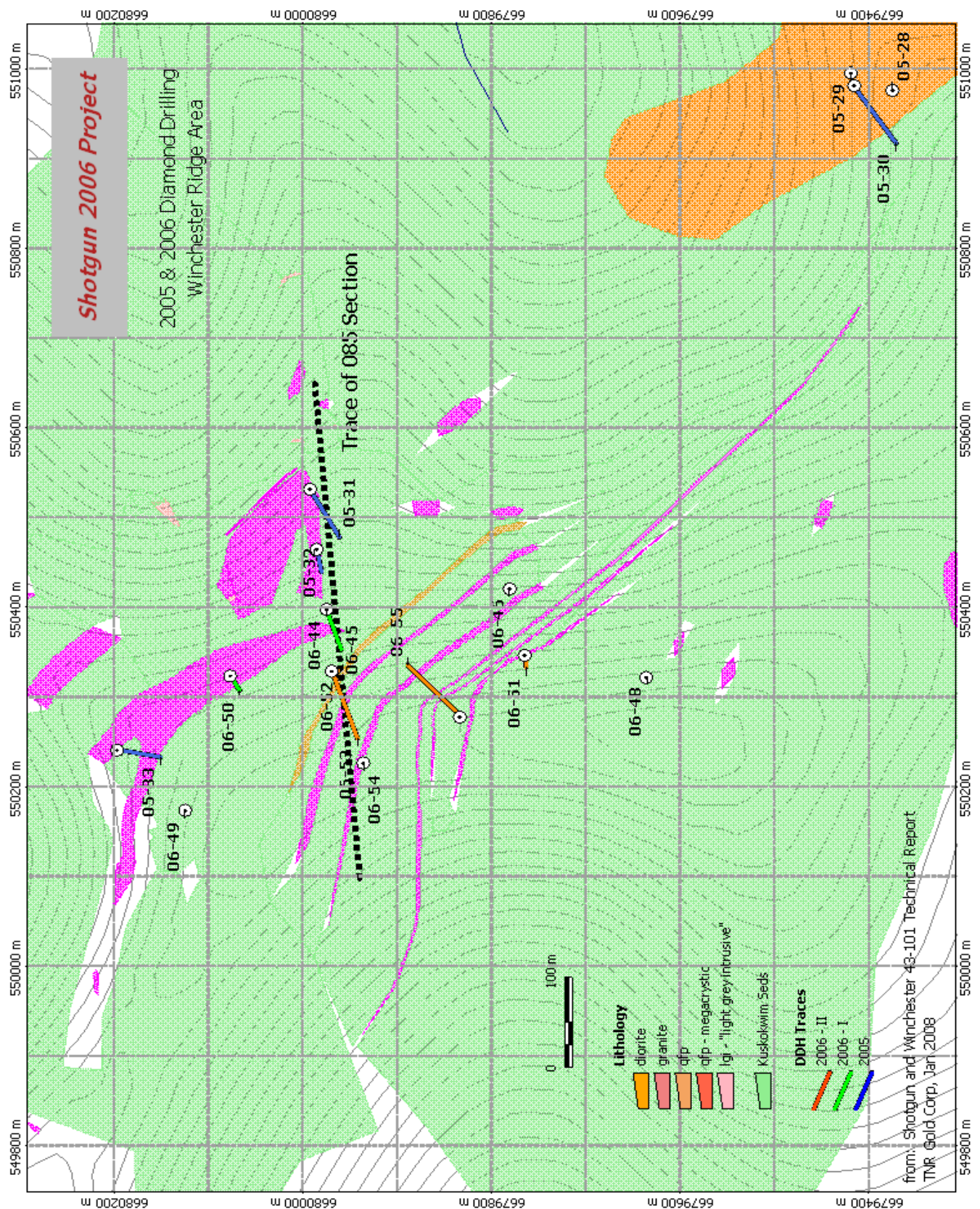
Three holes (DDH05-28, 29 and 30) drilled in the broad saddle area of eastern Winchester were targeted to identify a bedrock source of gold anomalies found in soil and talus. The first two holes were drilled vertically into feldspar porphyry. The third was angled to intercept an inferred contact between the porphyry and the Kuskokwim sediments based on the abrupt change in talus composition on the ridge. This third hole did not intersect the sediments but passed through various phases of the intrusive. Down slope dispersion of hornfels and Kuskokwim talus may mask the true location of the contact, or, by inference from structural data now available from further west on the ridge, the intrusive body may be dipping to the southeast and the hole orientation diverges from the upper contact. Drilling in this area does not yet appear to have identified a bedrock source that can account for the surface pattern of geochemically anomalous gold.



In a total of 315.26m of drilling, several geochemically anomalous zones of gold mineralization were identified from gold and multi-element data. These zones were not visually distinct and were not differentiated from adjacent core in the logs. The association of gold with arsenic, bismuth and tungsten strengthened the identification of these zones. Copper values (ranging from the mid-hundreds to mid-thousands of ppm Cu) were similar to those found at Shotgun ridge and significantly higher than found in the limited drilling at Shot or King. Copper was not found to correlate consistently with gold but is more broadly anomalous throughout the holes.

Multiple vein styles and alteration envelopes were observed at Winchester in core and some were correlated to styles seen in outcrop. Alteration envelopes and to a lesser extent textures and mineralogy differ depending on whether the veins are hosted in intrusive or sediment. Vein styles in intrusives and sediments were logged as different types although there is certainly overlap that additional work should resolve. Cross cutting vein relationships were recorded both in notes and photographically for later examination. There is a tendency for early stage veins (such as sulphide veins) to have no bleaching or visible surviving alteration envelope. Subsequent veins typically have envelopes with bleaching and reaction front patterns radiating from the veins. Some veins, believed to be latest stage, extensional quartz-carbonate $\pm$ tourmaline have little or no visible or bleaching alteration envelopes. These observations are consistent with an evolving fluid chemistry that suggests a long lived system with fluid chemistry changes over time similar to those described by Rombach and Newberry (2001) at Shotgun Ridge.

Toward the end of the 2006 field season structural mapping had advanced to the extent that bedding orientation data could be used in conjunction with drill core to approximately orient core. Unfortunately, sufficient data to support this only became available later in the season and the method was not applied to core. Future work at Winchester should use this method, or when possible, mechanical core orientation methods should be used.



Other Drilling

Shot:

Shot was chosen as the first drill target during the 2005 season. Its proximity to camp and attractive pathfinders signature led to this choice. Hole 05-27 was the first hole drilled with the new drill rig and proximity to camp was useful during the burn-in period. The hole was located on a talus covered sidehill, and pad slumping resulted in the rods becoming too tight to continue before the target depth was reached. Three more holes were drilled later in the season in an attempt to locate a bedrock source of talus and stream sediment gold anomalies. No significant gold intercepts were encountered in drilling at Shot. Sheeted tourmaline/quartz veining was located at Shot.

Operator	Year	Drilling
TNR	2005	301m

Table 8: Summary of drilling at Shot in 2005

King:

Two areas of King have produced anomalous gold values in rock. On the northern side of the mountain, three talus samples have assayed with values over 1g/t gold. The source of this material is not known and two short drill holes were placed near to samples to prospect for potential bedrock sources. No significant gold values were located in core. On the south side of the mountain, prospecting and mapping in 2007 examined a vein and breccia zone where twelve samples were collected in outcrop, subcrop and talus float believed to be near source. Of the twelve samples four returned below detection limit for gold (<0.034 g/t Au) while the remainder returned 0.208 to 2.985 g/t gold. This area has not been drill tested and targets could be set up for the next field season.

Operator	Year	Drilling
TNR	2005	145m

Table 9: Summary of drilling at King in 2005

Sampling Method and Approach

Drill core for all programmes was logged and sampled on site. During the TNR programmes field support, which included geological and technical support, was

provided by Coast Mountain Geological Limited and various subcontractors. Two concurrent styles of logging were used:

1. A **descriptive log** was recorded and formatted by a geologist in a word processor on site. The entire hole was divided into contiguous intervals of major lithological units. Sub-units and intervals of distinctive characteristics such as alteration were then added where needed using a format to indicate the intervals subordinate relationship to the major lithological unit. In addition, detailed notes of mineralization, veining and structural data were recorded in a format to indicate their scope. This style of logging enabled the geologist to be as descriptive as desired while providing language tools to reduce typographic errors in an easily legible record. Geologists were encouraged to use digital photography of details in the core and embed these photographs in the descriptive log. All major interval descriptions in the log begin with a photograph of a representative strip of core. Digital logging was an effective means of enabling backups and transfer of data to the head office in Vancouver.
2. An **attribute log** was recorded and formatted by a geologist in a spreadsheet on site. This log contains a quantitative or categorical description of contiguous intervals for the full length of the hole. Intervals used for description were sample intervals except in sections of unsampled core where blocks (usually drill runs) and lithological breaks were used to create intervals. This style of logging does not allow for flexible descriptions but is much better than the descriptive log for importing into a database or other data processing software. In addition, the style encourages geologists to develop skills in the systematic categorization and quantification of alteration, mineralization, veining and brecciation. Digital attribute logging using a spreadsheet helped to reduce typographic errors, ambiguous entries and improved consistency between geologists when the geologist was reasonably experienced in using spreadsheets.

Drill core was quickly examined at the drill site and the position of contacts or vein intersections was noted. Since all drill core had to be transported to camp by helicopter there was some risk of a load being lost. Once in camp, drill core was handled in a five step process.

1. Preliminary checking of block labels and position was conducted by a

technician or geologist. Core was visually checked to identify and pieces or sections that may have moved in position or been reversed when removed from the core tube. Any problems were resolved as soon as possible and before logging.

2. Geotechnical logging was conducted by a technician when a suitably trained technician was available. Since much of the TNR drilling was of a prospecting and exploratory nature, this stage was not always included.
3. Descriptive and attribute logging were conducted more or less concurrently. Since attribute intervals match sample intervals, drill core was also marked for sampling during this stage. Three part sample tags were used with one part being stapled to the core box at the beginning of the sample interval. Detailed photography of core to capture vein styles, crosscutting relationships, mineralization and alteration styles was done at the end of this stage.
4. Photography of core boxes was conducted after logging so that sample tags would be visible in the photographs. This enabled the photographic record to be used to help resolve sample interval discrepancies that might turn up later.
5. Sampling was then done of marked intervals. During the 2005 season core was cut by an electrically powered rock saw. In 2006 a hydraulic splitter was used to reduce noise and electrical load. Half of the split core was returned to the box while the other half was placed in a polyethylene sample bag. The second of three sample tag parts was then added to the bag which was then sealed using a security strap. Collections pans and surfaces, and the splitter jaws were then brushed clean before the next sample was split.

During the 2005 season samples were taken over the entire length of the hole to ensure that new styles of mineralization were not missed and to establish a lithogeochemical baseline in the areas being drilled for the first time. During the 2006 season sampling was reduced and sedimentary intervals with no veining or mineralization were not continuously sampled. Intrusives and veins were sampled. Consequently, a few holes such as 06-43 were sampled in their entirety.

A series of characterization samples of intrusives were collected in 2005 and 2006 for whole rock analysis and thin section petrographics.

Sample Preparation, Analyses and Security

Samples were routinely shipped by charter air services to Dillingham and then by commercial air services to laboratory facilities in Fairbanks. Bundles of samples were contained in rice sacks with several sacks making up each shipment. The contents of each shipment were recorded along with the date of shipment. Laboratories were asked to notify TNR supervisory staff on receipt of a shipment. Shipments between camp and Fairbanks usually took 2 to 3 days and were followed-up if they were not known to have arrived on schedule. After leaving Shotgun camp, samples were temporarily stored in either locked shipping (Cannex) containers, or held in restricted access areas. Samples were sealed with zap-strap type security ties and packaged in rice sacks which were also securely closed. No indications of tampering were noted or reported.

During the 2003 and 2004 seasons samples were processed by the ALS Chemex facility in Fairbanks before shipping to other ALS laboratories for analysis. During 2005 and 2006 seasons samples were prepared by Alaska Assay Laboratories of Fairbanks. Samples were then analysed by BSI Inspectorate (Inspectorate America Corporation) in Reno, Nevada until Alaska Assay had established their own fire assay circuit. A few samples were processed and analysed by Acme Analytical Laboratories and Global Discovery Laboratories of Vancouver, Canada. All of these laboratories are qualified and all except Alaska Assay Laboratories (which had not yet completed certification) are ISO 9001 certified. Subsequent to sample collection, all sample preparation.

Analytical methods used by ALS Chemex during 2003-4 were:

rocks: submitted samples were crushed to 70% < 2mm then split and pulverized to 85% < 75 µm. A 30g sample was then taken for fire assay with ICP-AES finishing for gold. A second sample was analysed using a four acid digestion and ICP-MS finishing for 47 elements.

soils: submitted samples were dried and screened to < 180 µm. A 30g sample was then taken for fire assay with ICP-AES finishing for gold. A second sample was analysed using an aqua regia digestion and ICP-MS finishing for 50 elements.

silts: were processed using the same procedures as soil samples.

Analytical methods used by Alaska Assay Laboratories and BSI during 2005-6 were:

rocks: submitted samples were crushed to < 2mm then split and pulverized to 75

µm. A 30g sample was then taken for fire assay with AAS finishing for gold. A second sample was analysed using an Aqua Regia digestion and ICP-AES finishing for 30 elements.

soils: submitted samples were dried and screened to < 180 µm. A 30g sample was then taken for fire assay with AAS finishing for gold. A second sample was analysed using an Aqua Regia digestion and ICP-AES finishing for 30 elements.

Since there has been no indication of coarse gold, no testing of screened metallics was done.

Core is stored at the Shotgun camp site.

Data Verification

Geochemical results were routinely checked for consistency using field duplicate data and comparison to existing data grouped by lithological unit. These methods looked at both gold and pathfinder elements and effectively became part of the ongoing review of variation in multi-element signatures across the property. Standards and blanks were not inserted into prospecting and reconnaissance sampling done from 2003 to 2005.

Commercial CRMs (purchased from Rocklabs) and blanks were inserted into the sample stream during the 2006 drilling programme. Three CRMs were used with average values of 8126, 1305, and 590 ppb Au of which 19, 20 and 20 respectively were inserted into the sample stream before shipping to the lab. Most batches of sample had one of each CRM but some had more than one of the same standard. A total of 49 blanks were initially added at random, however this was later changed to position them immediately following core that was expected to have significant gold values.

Results from the blanks and CRMs were monitored and shared with the laboratory. Some discrepancies were encountered in both blanks and CRMs and the issues were discussed with the laboratories after internal review. Four blanks returned high Au values. Two of these when viewed with trace elements appear to have been mislabelled core sample (and not blanks). One appears to have been a standard that was inserted by mistake instead of the blank, leaving one blank with no explanation. This blank had been inserted randomly which coincided with the beginning of a sample batch and after the 8126 ppm Au CRM. Of the CRMs, the 1305, and 590 ppb Au series had only one sample each (different batches) that were outside control.

One of these was very low, 227 ppb which is well below the 583 ppb Au average. The 8126 ppb Au CRM stream had five results out of control which were five out of the six last CRM samples spread over five batches. Over this interval of batches the other CRMs were generally closer to their average values than they were for most of their series.

The conclusion of the review was that few of the discrepancies were due to the laboratories involved but most were more likely due to a) mistakes made when inserting standards into the sample stream and/or b) at least one of the standards was flawed generating a greater range of values than expected. Standards in 2006 were purchased in bulk rather than pre-measured packets and a regular volume known to be in excess of 30g was measured for each standard inserted into the sample stream. This may have give the standards an opportunity to become dehomogenized during transport or in other environments when exposed to persistent vibration. A number of changes to standards and blanks handling should be implemented in future programmes to avoid difficulties experienced in 2006. In spite of the difficulties encountered with standards, the author believes the geochemical data to be fundamentally reliable.

Data collected by NovaGold was not verified by further sampling of the remaining half of the core from their drilling programme. In addition to providing new information, hole 06-43 provided confirmation of existing NovaGold data by drilling through areas near previous holes. There are no outstanding concerns about geochemical data received from NovaGold.

In addition to geochemical data verification, spatial data verification of diamond drill hole collars and surface mapping was conducted. This was done partly to ensure consistent use of mapping datums and GPS procedures. The majority published maps and work done at Shotgun used the NAD27 Alaska. Since GPS systems use a different system internally it is possible to inadvertently introduce offsets in the order of 100m. NovaGold and TNR drill hole collars were checked and found to be consistent and accurate to the level of the instruments. Mapped contacts were also checked and some were found to have regular displacement from where they were measured in 2006. The geological base map was adjusted to reflect these updates. None of the adjustments materially affected the interpretation of the data.

Some sections of core from 1998 drilling were relogged during 2005 and 2006 to aid in establishing consistency between generations of drilling. In addition, consistency

checks were performed on logging done by Coast Mountain Geological staff. The greatest source of inconsistency was found to be in alteration logging and vein type classification. While the results of the checks were useful in confirming quality and identifying potential training areas for staff, no concerns were raised regarding the overall quality or application of the drill hole data.

Adjacent Properties

There are currently no properties or prospects adjacent to the Shotgun and Winchester prospects.

Mineral Processing and Metallurgical Testing

Two coarse reject samples from hole 98-07 were submitted by NovaGold to Tunnes in Halifax, Nova Scotia for preliminary bottle roll and agglomeration tests (St. George and Schneider, 1999). Bottle roll tests on both samples yielded 93% recovery rates from samples reduced to -0.15mm size. Agglomeration tests on one of the coarse reject samples returned 93% recovery rates on -1mm agglomerated material.

Mineral Resource and Mineral Reserve Estimates

There are currently no resources or reserves on the Shotgun prospect that comply with definitions and guidelines acceptable to NI 43-101. Those geological estimates that do not comply are presented under the heading *History*.

Other Relevant Data and Information

The author is not aware of any other data that has material bearing on the Shotgun property.

Interpretation and Conclusions

The primary goal of the exploration strategy used by TNR at Shotgun was to identify new zones of mineralization distinct from the zone previously identified on Shotgun Ridge. Following district scale exploration and more detailed work on several prospects, this goal was achieved by the discovery of mineralized hypabyssal latite sills at Winchester. Various challenges ranging from climate and accessibility to crew and equipment availability have resulted in slower progress than was originally anticipated.

Soil and talus geochemistry, drilling, structural and alteration mapping has identified anomalous gold over approximately 2.1 kilometres strike length. Sample spacing along this trace varies due to variable sampling density, and consequently the continuity of significant mineralization cannot be inferred from current data.

Structural mapping and interpretation has led to better understanding of structural controls on mineralization. This is most evident at Shotgun Ridge where hole 06-43 intersected 210.5m of 1.29 g/t gold across two zones that appear to be dipping steeply to the SW. This suggests that the quartz breccia is a NW striking, secondary, dilational structure derived from the NE striking regional, dexteral, strike-slip faulting. In addition to providing new targeting insight, this discovery opens up the Shotgun Ridge zone at depth.

The geochemical signature seen in soils, stream sediments and rock across the Shotgun property shows a multi-element character that is consistent with intrusion related gold mineralization and had local variation that may assist in lateral and vertical zonation within the system. The consistency of this geochemical signature crosses the compositional variation of the intrusions from the granite porphyries of the Shotgun Pluton to the syenite porphyry and latite sills of Winchester.

Vein types and envelope alteration styles suggest that there has been a long lived system at Winchester with varying fluid composition. This appears to be consistent with the type of system described at Shotgun Ridge by Rombach and Newberry (2001).

Magnetic surveys results, drilling, structural mapping and reinterpretation have led to a better understanding of the fluid conduits and trap mechanisms at Shotgun Ridge and Winchester. Along with other results of the last few seasons, this can be used to review Shot and the two prospects on King to see if previously overlooked styles of mineralization may exist that could explain reconnaissance geochemical anomalies. In addition, structural data in conjunction with focused geochemical methods to detecting buried mineralization could be used to explore prospective areas of the property with no bedrock exposure.

Recommendations

Shotgun and Winchester now have a considerable amount of data in a variety of forms. This is a considerable asset of geological information which is increasingly difficult for an individual to visualize or conceptualize. During field seasons consideration of how to represent geological information was an ongoing part of the data collection process. This has resulted in the majority of data being in reasonably flexible digital formats. Careful planning of data capture is essential to continuing to build this asset. The diversity of data and size of the area makes this project a candidate for data mining and mineral potential modelling methods that could aid in geological reasoning by pulling patterns from the mass of data.

1. Compilation

Further compilation work is warranted that goes beyond the scope of this report and is critical to optimal planning of the next field season. The following areas should be considered in the compilation:

- a) review of surface and core data for lithogeochemical zonation that could identify lateral and vertical position within the system.
- b) extract curvi-linear features from the geophysical data with particular focus on what might reflect the 055 and 140 orientations.
- c) build updated set of positive predictor layers or maps using new data (including 2007 site visit and prospecting) using the
- d) consolidate and review data, particularly focusing on areas that should be revisited *knowing what we now know* about Winchester style mineralization and the enhanced structural model.
- e) if possible mineral potential mapping should be included. GIS data should be built to support this type of processing should it become available.
- f) prepare a summary of above results. Map products and database should be ready for use in the field season. Details of drill targets should be completed at this stage.
- g) review what geophysical ground methods may be able to assist in following NE structures to other brecciated zones.

2. Surface exploration

This phase should be done in conjunction with phase 3 as snow cover and crew

availability permits. Since results from this phase may generate new targets, it may be necessary to augment the geological staff once sufficient snow is gone to ensure this phase is completed in time to benefit the drilling season.

a) mapping: completing detailed mapping of Winchester and revisiting King and Shot should be highest priority.

b) geochemical sampling: in addition to routine sampling an orientation survey for detection of buried mineralization should be conducted. Regardless of other method(s) used, paste pH should be included in the survey. Selection of method should use the results of phase one in identifying an approach that works for pathfinders. In addition, a routine policy of sending every 10th (or similar interval) intrusive sample for whole rock analysis should be used to continue building up a geochemical database of the many intrusive phases.

c) structural: mapping to identify field evidence of geophysical traces of structure should be combined with selective collection of structural data that might help locate dilational or breccia zones.

3. Drilling

Use oriented core in drilling at Winchester where structural fabrics can provide greater detail than is available on the surface. Oriented core is less likely to be as useful at Shotgun Ridge, but may be valuable if drilling is done elsewhere through Kuskokwim sediments. Targeting is contingent on the results of phase 1 and subsequently on phase 2.

a) Winchester: The section orientation should be rotated to a more perpendicular to strike orientation. Extending the drilled area along strike should be a priority. This should include testing in the saddle area again since there are some indications that there may be mineralized zones within the porphyries. Drilling has not yet explained surface anomalies in the vicinity of the saddle. Stepping out to the W of the drilled area is also worth consideration.

b) Shotgun: the main target to focus on initially is to test the two feeder zones to depth and also laterally along the strike length of the known Shotgun Ridge zone. Testing the nature of termination or offset at either end of the zone would also be important. The latter should be coordinated with other methods planned for surface sampling work.

c) other targets: the south end of King could be quickly tested with a three or four

short holes oriented to cross the 055 and 140 orientations.

Budget

This budget has been prepared for a field season running from the beginning of June to mid September (110 field days) using two drills and sufficient crew to support the drilling and some additional mapping and sampling. Costing data from previous years along with current quotes and adjustments for cost increases have been used in the estimate. A crew of 17 or 18 would implement the programme.

Item	Estimate
Helicopters	\$589,875
Drills	\$790,000
Geological and support staff	\$595,750
Fuel (Camp, drills and helicopter)	\$202,125
Camp and field gear	\$463,750
Laboratory	\$50,000
Travel	\$50,000
Reporting, topographic products, etc.	\$75,000
10% contingency	\$281,650
total	\$3,098,150

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Date and Signature Page

This report titled “Technical Report on the Shotgun – Winchester Project, SW Alaska”, dated 7 March 2008, was prepared by and signed by the following author:

“signed”

Dated at Vancouver, BC
7 March, 2008

John C Harrop, P.Geo.
Senior Geologist
TNR Gold Corp.

Certificate of Qualifications

I, John C. Harrop, P.Geo., do hereby certify that:

As an author of this **Technical Report on the Shotgun – Winchester Project, SW Alaska**, dated 7 March 2008, I hereby make the following statements:

1. I am currently employed as a Senior Geologist by: TNR Gold Corp, Suite 620 – 650 West Georgia Street, Vancouver, British Columbia, Canada, V6B 4N9
2. I graduated with a Bachelor of Science degree in Geological Sciences from the University of British Columbia in 1983.
3. I am a member of the Professional Association of Professional Engineers and Geoscientists of British Columbia (Reg. No. 19122).
4. I have worked as a geologist since my graduation from university in 1983.
5. I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfil the requirements to be a "qualified person" for the purposes of NI 43 -101.
6. I am responsible for the preparation of this technical report titled Technical Report on the Shotgun – Winchester Project, SW Alaska, and dated 7 March 2008.
7. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which makes the Technical Report misleading.
8. I am not independent of the issuer based on the tests in section 1.5 of National Instrument 43-101 due to my employment by TNR Gold Corp.
9. I have read National Instrument 43-101 and Form 43-101FI, and the Technical Report has been prepared in compliance with that instrument and form.
10. I consent to the filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public, of the

Technical Report on the Shotgun – Winchester Project, SW Alaska,

Signed and dated this 7th day of March, 2008 at Vancouver, British Columbia.

”signed and sealed”

John C. Harrop, P.Geo.