

676410

103G 004

GEOLOGICAL SUMMARY REPORT

**SOUTHEASTER GOLD PROPERTY**

Graham Island, Queen Charlotte Islands  
(Skeena Mining Division)

NTS. 103 G-5W/103 F-8E  
LAT: 53° 17' NORTH / LONG: 131° 59' WEST

for:

**OKAK RESOURCES LTD.**

Ste 1300 - 666 Burrard Street  
Vancouver, B.C., V6C 3J8  
Fax: 604-681-7993

*copy provided  
by  
Barry Price  
Oct. /97*

by:

103G 004

**B.J. PRICE GEOLOGICAL CONSULTANTS INC.**

716 - 850 West Hastings Street,  
Vancouver, B.C., V6C 1E1

Tel: (604) 682-4488 Fax: (604) 682-8728

Revised December 31, 1996  
Amended March 7, 1997

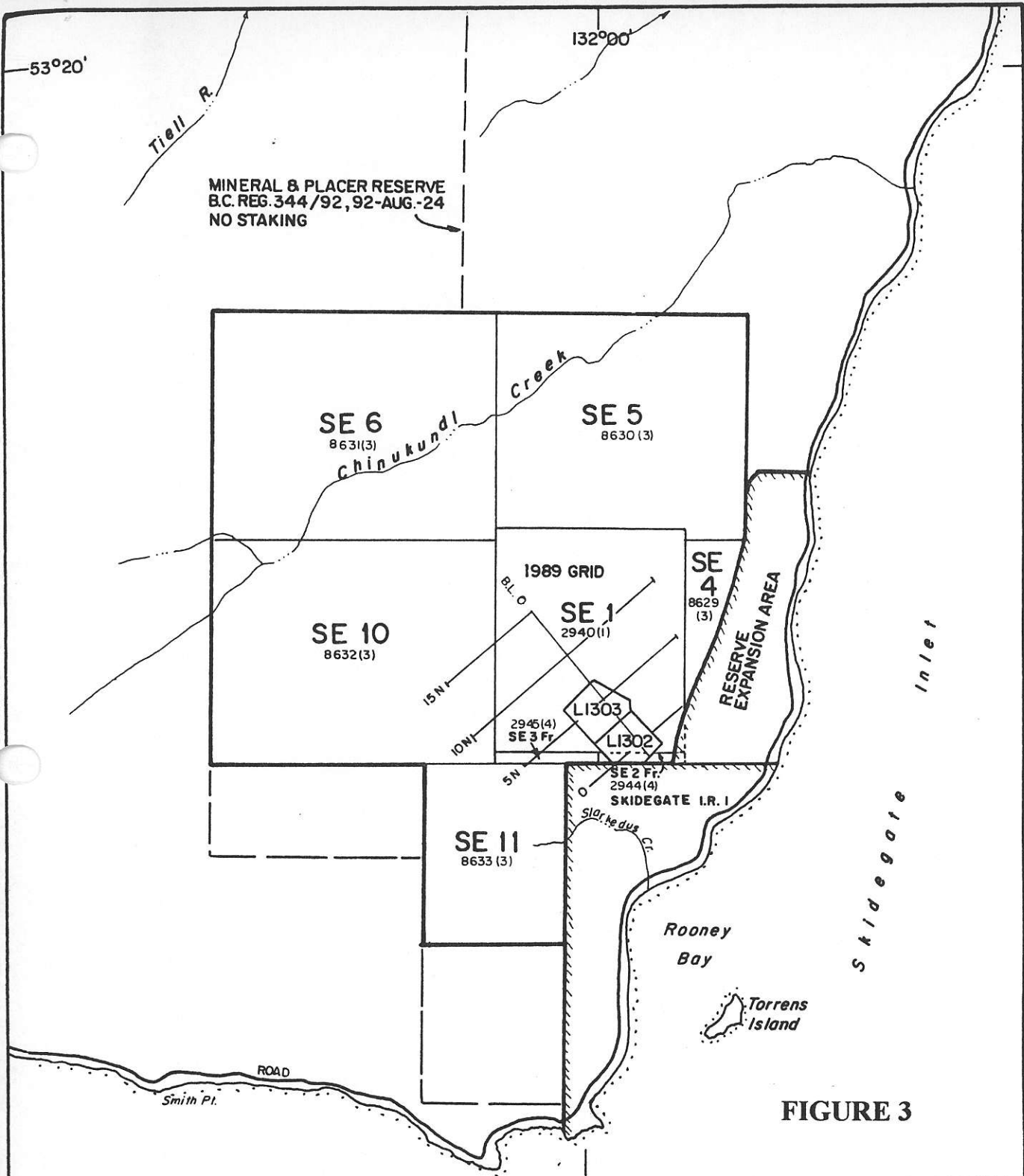


FIGURE 3



*Beum Price*

OKAK BAY RESOURCES LTD.		
SOUTHEASTER PROPERTY		
CLAIM MAP		
N.T.S. 103F-8, 103G-5		SKEENA M.D., B.C.
SCALE 1:50,000	DATE: FEB. 1997	FIGURE
DRAWN BY: B.P.		

Y  
4  
Y  
S  
Y  
E  
Y

A.J.Schmidt, P.Eng. On the Main Vein, two trenches averaged 0.411 opt over 4 meters and 0.095 opt over 4 meters. Schmidt recommended a follow-up program to include grid preparation, ground magnetic and VLF-EM surveys, geological mapping, and sampling to be followed by trenching of favorable targets. However, the property was dropped before these recommendations could be carried out.

1989: The property was optioned by Clear Creek Resources Ltd., which was then a subsidiary of Worthington Resources Ltd., and Guinet Management Inc. was hired to manage the exploration work. P.A. Christopher, Ph.D., P.Eng. was retained to provide geological supervision of the project and to complete a geological report describing the work done. Clear Creek Resources Ltd. has retained the property to the present day by making option payments and filing assessment work.

## EXPENDITURES ON THE PROPERTY:

Total exploration expenditures on the property by Clear Creek from 1989 to the present are tabulated below; these figures do not include staking or administrative costs.

### Expenditures on the Southeaster Property

YEAR	COMPANY	ACQUISITION	EXPLORATION	WORK DONE
1989	Clear Creek	\$15,000.00	\$72,248.00	Geochemical, geophysical surveys
1990	Clear Creek	\$5,000.00	\$122,455.00	Trenching and Drilling
1991	Clear Creek	\$40,000.00	\$97,636.00	Trenching and Drilling
Total		\$60,000.00	\$292,339.00	
<b>Grand Total</b>			<b>\$355,091.00</b>	

SOURCE: Figures supplied by Clear Creek.

## REGIONAL GEOLOGY

Initial geological investigation of the Queen Charlotte Islands in 1872 was done by **James Richardson**, followed in 1878 by G.M. Dawson's classic study, (GSC Report of Progress 1878-79) which included botanical, zoological and anthropological studies. Additional work was done in 1905 by **R.W.Ellis** and in

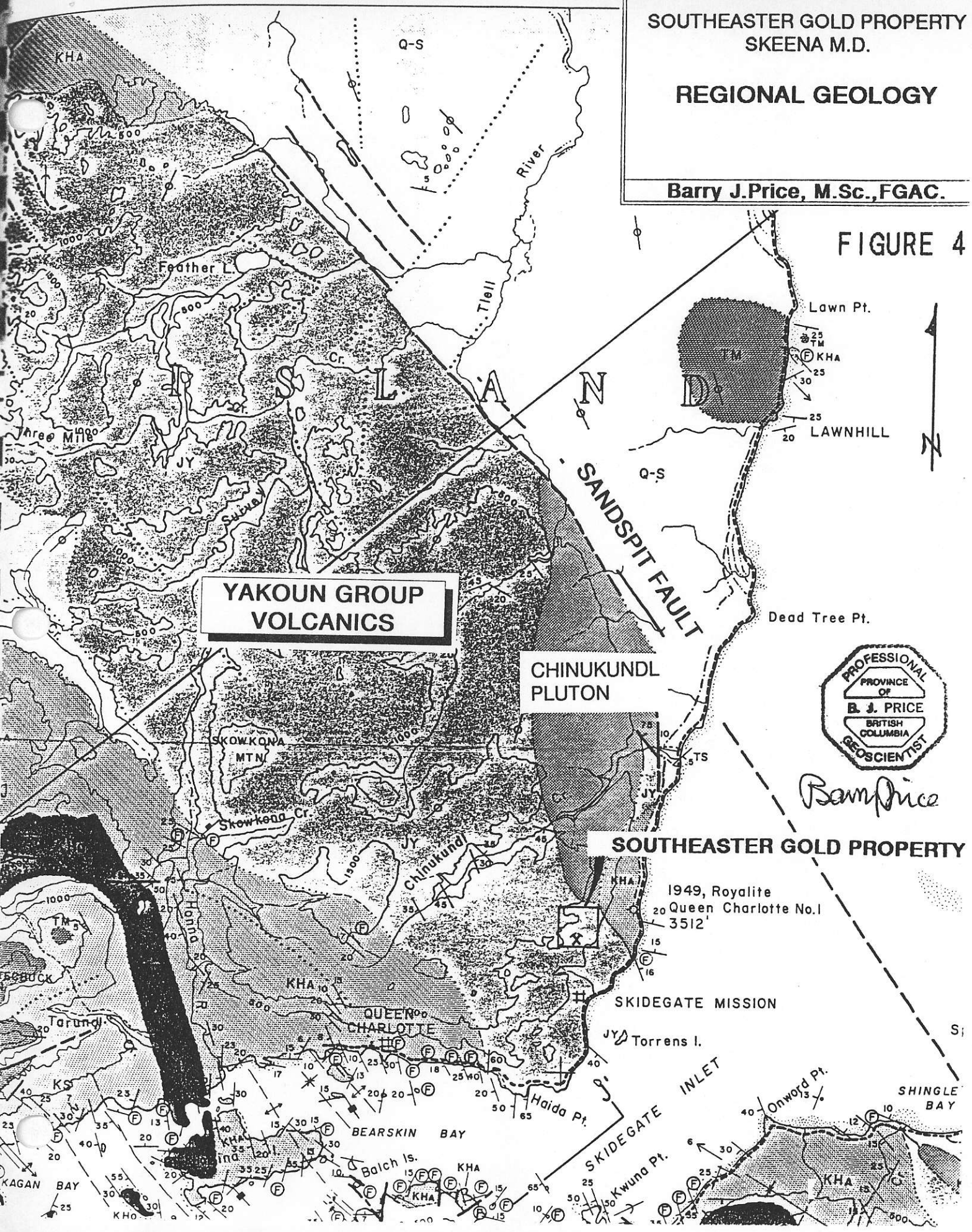


SOUTHEASTER GOLD PROPERTY  
SKEENA M.D.

REGIONAL GEOLOGY

Barry J. Price, M.Sc., F.G.A.C.

FIGURE 4



*Barry Price*

SOUTHEASTER GOLD PROPERTY

1949, Royalite  
Queen Charlotte No. 1  
3512'

LEGEND

STRATIFIED ROCKS

QUATERNARY

- Q** Recent alluvium, Pleistocene till, marine drift, and outwash sands
- Q-S Quaternary overlying Skonun Formation
- Q-M Quaternary overlying Masset Formation

TERTIARY OR QUATERNARY

- TOT** TOW HILL SILLS: olivine basalt

TERTIARY

MIO-PLIOCENE

- TS** SKONUN FORMATION: sands, mudstone, sandstone, conglomerate, and lignite

PALEOCENE-EOCENE?

- TM** MASSET FORMATION: subaerial basalt flows and breccias, rhyolite ash flows, lesser dacite
- TM- Undivided Masset Formation

- Divided Turlu Facies
- TMc- Basalt member
- TMb- Rhyolite member
- TMa- Mixed member
- Hypabyssal Equivalents
- TMd- Feldspar porphyry

CRETACEOUS

QUEEN CHARLOTTE GROUP (KS, KH0, KH4)

- KS** SKIDEGATE FORMATION: shaly siltstone, feldspathic sandstone, calcareous siltstone

- HONNA FORMATION:** conglomerate with granitic cobbles, orkasic grits, minor shale

ALBIAN-TURONIAN

- KHA** HAIDA FORMATION: green glauconitic and grey sandstone, grey silty shale and siltstone, buff calcareous siltstone

NEOCOMIAN

- LONGARM FORMATION:** dark grey calcareous siltstone and fine lithic greywacke, angular fine conglomerate, minor volcanic rocks

VANCOUVER GROUP (TKA, TKU, JKU, JM, JY)

JURASSIC

BAJOCIAN-CALLOVIAN

- JY** YAKOUN FORMATION: porphyritic andesite agglomerate and flows, calcareous scoriaeous lapilli tuff, volcanic sandstone and conglomerate, minor tuffaceous shale, coal

PLIENSCHACHIAN-TOARCIAN

- MAUDE FORMATION:** grey blocky argillite and shale, grey green lithic sandstone

JURASSIC AND TRIASSIC

KARNIAN-SINEMURIAN

- JKU** KUNGA FORMATION: massive grey limestone, flaggy black limestone, flaggy black argillite-undivided

- JKU** Flaggy black argillite member, minor limestone

- TKU2** Flaggy black limestone member, minor argillite

- TKU** Limestone members-undivided

- TKU1** Massive grey limestone member

TRIASSIC

KARNIAN AND OLDER

- TKA** KARMUTSEN FORMATION: basalt massive flows, pillow lavas, pillow breccia and tuff, related sills, minor interlava limestone, volcanic sandstone and shale, amphibolitized equivalents

PLUTONIC ROCKS

CRETACEOUS AND TERTIARY

- KTP** POST-TECTONIC PLUTONS: quartz monzonite, granite, granodiorite, quartz diorite

JURASSIC?

- JS** SYNTECTONIC PLUTONS: hornblende diorite, quartz diorite

- JSM** MIGMATITE: mixed hornblende diorite and amphibolite

- Bedding (inclined, horizontal, vertical, overturned)..... / + / ⊗
- Bedding from photogeology (inclined, horizontal)..... / ⊗
- Primary foliation, plutonic rocks..... / ⊗
- Secondary foliation, schistosity, gneissosity, and cleavage..... / ⊗
- Joints (inclined, vertical)..... / ⊗
- Fold axes (anticline, syncline, arrow indicates direction of plunge)..... ↕
- Overturned fold axes (anticline, syncline)..... ↕
- Dragfold with plunge symbol on anticline..... Λ
- Direction of flow in volcanic rocks..... →
- Fault (defined, approximate)..... ————
- Lineaments..... ..
- Geological contact (defined, approximate, assumed)..... ————
- Grooves and drumminoid features from photogeology..... ————
- Striations and Roche Moutonnées..... ————
- Old sea cliffs and shore lines..... ————
- Beach ridges..... ————
- Terrace and channel margins..... ————
- Low tide limit of rocky shore line..... ————
- Beaches and lagoon flats..... ————
- Community..... ————
- Important mineral prospect (see Figure 34 for complete list and locations)..... \*
- Adit..... ————
- Well (abandoned)..... ————
- Fossil locality..... ⊙
- Road..... ————



*Barry J. Price*

LEGEND FOR REGIONAL GEOLOGY

1912 by **C.H.Clapp**. A systematic areal study of Graham Island was done by **J.D Mackenzie** in 1913-14 (GSC Memoir 88, 1916).

The first modern geological survey and mapping program was initiated in 1958 by **A. Sutherland Brown** for the B.C. Department of Mines; this was completed in 1968, (B.C.D.M. Bulletin 54), and provides a solid framework for understanding the geology of the Queen Charlotte Islands, from which this brief summary has been compiled:

The Queen Charlotte Islands forms the northern part of the "Insular Tectonic Belt" which has been assigned the name "Wrangellia Terrane". Rocks ranging from Late Triassic (Karmutsen Group) to Recent are exposed. Volcanic rocks are intercalated with fossiliferous marine sedimentary rocks to give a fairly complete stratigraphic record. Three major periods of volcanism in Late Triassic, (submarine basaltic Karmutsen volcanics), Middle Jurassic, (Yakoun volcanics - mainly andesitic), and Paleocene (Masset volcanics - basaltic to rhyolitic sub-aerial) were separated by marine shelf and flysch sedimentary episodes. Plutonism occurred in three main pulses - Late Jurassic, early Cretaceous and Tertiary.

Major deformation, uplift and erosion occurred in the Late Jurassic time, and another period of faulting and local folding occurred in the early Cretaceous. Finally, following early Tertiary volcanism, came another period of faulting, post-tectonic intrusion, uplift and erosion.

Evolution of igneous, volcanic and sedimentary processes are evident; the volcanic sequences show compositional trends from oceanic tholeiitic basalts through porphyritic andesites to plateau basalts and rhyolite flows and ash tuffs. Similarly, intrusives suites trend from mafic rich hornblende diorite to quartz diorite, quartz monzonite and soda granite. Sedimentary arenites trend from quartz free members to quartz-rich feldspathic sandstones.

In the vicinity of Skidegate, at the southeast end of Graham Island, much of the area is underlain by **Yakoun Group volcanics**. This unit is intruded in the vicinity of Chinukundl Creek by the **Chinukundl Pluton**, a relatively small post-tectonic intrusion composed of fairly uniform medium-grained biotite-hornblende granodiorite and quartz diorite. The pluton has a hornfelsed aureole. The pluton is regarded as being in the same suite as the Kano batholith situated on the west coast of Graham Island.

Figure 4. shows the general geology in the vicinity of Skidegate. The large area of Yakoun volcanics extends northwestward as an antiform flanked on either side by Cretaceous Haida Formation clastic

sediments. At the mouth of Chinukundl (Miller) creek, a thin wedge of Tertiary sediments is faulted against the Chinukundl Pluton.

Six miles north of the Southeaster property, the Sandspit Fault System cuts the Yakoun volcanics and Chinukundl pluton. The fault system trends northwest and dips nearly vertically. The Northeast side has dropped thousands of feet, and in the subject area has Tertiary Skonun sediments and Tertiary Masset volcanics juxtaposed against Yakoun volcanics and the Chinukundl pluton. Oddly enough, the most recent movement on the fault has been up to the east, and Sutherland Brown indicates the zone is still active.

### **MINERAL DEPOSITS IN THE AREA:**

The Southeaster gold deposit was one of the earliest mineral deposits staked on the Queen Charlottes, dating from about 1909. As a result of the discovery in 1970 of what turned out to be "epithermal" gold mineralization at the "Cinola" property, approximately 12 miles (19.2 km) northwest of the Southeaster prospect, considerable exploration was completed between 1970 and 1982 between the two properties. The exploration activity was concentrated along the trace of the Sandspit Fault.

Renewed interest in the epithermal deposits along the Sandspit Fault has led to considerable new staking in the area by Misty Mountain Gold Inc. The Cinola deposit, a significant low-grade bulk tonnage deposit, now owned by Misty Mountain Gold, and a number of other lode gold properties in this belt are described in some detail in an Appendix.

The Cinola property has now been renamed the "**Harmony gold property**". A brief description of the property follows:

**Harmony Gold Property:** The Harmony Gold property, originally called the Babe or Cinola deposit was discovered in 1970 by a local prospector Efreem Specogna. The property is situated on Yakoun River, approximately 10 kilometers southeast of Juskatla on Graham Island. The property now covers over 170 square miles along the Sandspit Fault. Previous exploration by Quintana Minerals Ltd. and Consolidated Cinola Mines Ltd. to 1981 outlined an epithermal deposit with reserves of 53 Million tonnes of 0.055 oz/ton gold. Additional work by City Resources (Canada) Ltd to 1987 indicated Mineable Reserves of 27.3 Million tons averaging 0.062 opt gold (0.032 opt cut-off).

The classic epithermal alteration and mineralization is hosted by Skonun sandstone and conglomerate on the east side of the Sandspit fault, at a flexure in the fault system which allowed rhyolite volcanics to extrude to surface. Gold occurs mostly as native gold in a vein stock work within the strong silica-pyrite alteration area. Higher grade veinlets in excess of 6 g/t occur in wallrock which generally grades about 1 g/t. Some intersections such as 137 ft grading 1.2 oz/ton gold illustrate the strong structural control for the mineralized veins and stockworks.

Over the 25 years since discovery, in excess of \$40 million has been spent on exploration, mainly drilling but including underground development. At present, Misty Mountain Gold Ltd. has outlined open-pittable reserves of 31 million tonnes of reserves of 2.64 g/t gold (0.077 oz/ton) or alternatively, underground reserves of 7.7 million tonnes grading 6.86 g/t (0.20 opt). Several additional zones of interest are found along the fault system which trends southeastward.

The Harmony gold project claims extend along the fault system to within 5 kilometers of the Southeaster property.

## GEOLOGY OF THE SOUTHEASTER PROPERTY:

The property is underlain mainly by volcanic rocks of the Yakoun Group, which has been described by Sutherland Brown as follows:

**"The Yakoun Formation is primarily a volcanic unit dominated by pyroclastic rocks, many of which are formed largely of porphyritic andesite. In addition, the formation includes much volcanic sandstone, some conglomerate, shale, siltstone, and minor coal. Many of the sedimentary rocks are marine but some are non-marine, and it is likely that the vents from which the volcanic rocks were erupted built cones out of the marine basin. This is the youngest formation of the Vancouver Group, and its age is Middle Jurassic (Bajocian and Bathonian) and earliest Upper Jurassic (Callovian)."**

The Yakoun Formation conformably overlies the Maude Formation and may be disconformable, or somewhat unconformable on the Kunga Formation. Between the Haida Formation and the Yakoun Formation, an angular unconformity is certain. In lithology, the Yakoun Formation is dominated by pyroclastic textures and is characterized by porphyritic andesite agglomerate and tuff. The associated sedimentary rocks are directly derived from volcanic rocks. (Sutherland Brown, 1968). Weathered outcrops are generally mottled brown, but fresh rocks are commonly grey, green or purplish. Fragments



are generally lapilli sized but may exceed 2 feet. The agglomerate is compact with a dense matrix which may be calcareous. Phenocrysts are plagioclase, pyroxene or amphibole. Water-lain tuffs are occasionally seen with limy matrix. A lapilli tuff with scoriaceous fragments normally forms the basal member of the formation. Flow rocks occur sparingly.

Origin of the Yakoun Formation was a linear belt of andesitic volcanic cones which built on the sea-floor, initially releasing fine scoria into a limy marine environment, but gradually building broad cones of vesicular blocky porphyritic agglomerate, from which erosion distributed volcanic detritus on which lush tropical vegetation occasionally thrived, as indicated by fossil plants and coal. The volcanic episode was probably brought to a close by disruptions accompanying emplacement of the syntectonic batholithic intrusions.

The Yakoun Formation volcanics are equivalent to the Lower Hazelton and Upper Takla Groups and possibly the Bonanza Group of Vancouver Island. (Sutherland Brown, 1968).

Examination of outcrop and core by Thorpe, (1990) and Yorston, (1989, 1990), confirm that the Southeaster property is underlain by agglomerate, tuffs and lapilli tuffs of andesitic composition. In the area of the showings, the volcanics are cut by one or more broad shear zones trending northwestward parallel with the Sandspit Fault, (which lies 6 km to the east). Along the shear zones, strong alteration is present characterized by the "propylitic" assemblage of chlorite, carbonate pyrite and sericite. Irregular quartz and quartz-carbonate veins are accompanied by varying proportions of sulphide minerals, including pyrite, galena, sphalerite, and chalcopyrite, and a dark grey mineral which may be a telluride. The veins are accompanied by strong argillic alteration giving wide zones of white to buff clay, which is soft and incompetent. Some of this material is fault gouge.

The property is briefly described by Mackenzie, (1916), based on information from Maclellan, as follows:

**"The deposit consists of a vein averaging 9 ft thick, striking north 40 degrees west, and with a vertical dip. The vein is slightly irregular, and apparently faulted off at the southeast end. The vein material is almost wholly milky quartz, occurring as a replacement of a brecciated zone in the Yakoun volcanics. Irregularly distributed through the vein are bunches of sulphides, containing galena, sphalerite, pyrite and chalcopyrite. The gold occurs in the galena, which carries up to 30 ounces in silver, and also with an unknown yellow mineral encrusting some of the specimens in thin films. Occasionally, free gold may be seen with the naked eye, but usually it cannot be thus made out. Specimens of galena gave assays as high as \$2600 to the ton, but the bunched nature of the ore necessitates thorough prospecting before the value of the property can be definitely established."**

## WORK DONE IN 1989:

In 1989, work done included geochemical soil surveys, (423 samples), Geophysical surveys, (VLF and Magnetometer), and excavator trenching. Total value of work done in 1989 was \$72,248 as described by Christopher, (1989). A program of trenching, diamond drilling and sampling with estimated cost of \$170,000.00 was recommended by Christopher. The accompanying compilation map shows the gold anomalies in soil, magnetic and VLF-EM anomalies that resulted from the program.

**Geochemistry:** The 423 soil samples were collected over both detailed and reconnaissance grids. On the detailed grid, which covers a small area from Ln 150 (grid south) to Line 400 north and 160 meters Grid east and west of the baseline, samples are taken at 20 meter intervals. (Note: the Baseline is oriented at 320 degrees - north 40 degrees west). The reconnaissance grid extends from Line 500 North to Line 1500 North and from 600 meters to 1000 meters Grid East and West from the baseline, as shown on the accompanying maps; sampling here was at 50 meter intervals.

Soils were analyzed for 30 elements (ICP) and gold; only gold was plotted as shown on the accompanying compilation map. Values are relatively low, ranging from detection level - 1 ppb to a high of 138 ppb near the main showing. However, low background of 1-10 ppb is explained by thick glacial overburden and vegetative cover, (Christopher, 1989). Values above 10 ppb are considered anomalous. The area of underground workings and surface trenches along the creek between 150 South and 400 North gives rise to a number of anomalies, and the reconnaissance grid also has a number of weaker anomalies. Some of these were trenched in 1990 and 1991, but a number remain to be explored.

In mineralized veins, gold is associated with galena sphalerite, chalcopyrite and un-identified grey minerals which could be tellurides or sulphosalts. Christopher, (1989) noted that "ICP geochemical results suggest a correlation between gold, lead, zinc and copper, with previous work showing a correlation between mercury and gold".

Soil geochemical values for copper, lead, zinc and arsenic are not strongly anomalous, and were not plotted by Christopher; maximum and minimum values are shown in the following table:

ELEMENT	MINIMUM	MAXIMUM	CONC. FACTOR	LOCATION OF MAXIMUM
Gold	1 ppb	138 ppb	138 X	Baseline/50 N.
Copper	4 ppm	113 ppm	28 X	Ln 150 N/40 W.

TABLE 6

Geological Reserves - Southeaster Zone  
(W.G.Norrie Loewenthal, 1932)

DESCRIPTION VALUE (1932)	TONS	WIDTH	
BLOCK A \$20.53/ton	1680 Tons	6.0 Ft	
BLOCK B \$12.00/ton	170 Tons	3.5 Ft	
BLOCK C \$7.00/ton	2400 Tons	4.0 Ft	
<b>TOTAL</b>	<b>4,250 Tons</b>	<b>4.0 Ft</b>	<b>\$12.50/ton</b>
	(0.605 opt)		

Note: The values given are exactly as stated by Norrie-Lowenthal. The writer does not have access to the assay figures or plans from which the values were derived. (The writer determined that the 1932 Gold price was \$28.60/oz., from which the grade of 0.605 opt was calculated. )

Norrie-Loewenthal also suggested 500 tons averaging \$10.80 per ton (1932 Gold price = \$28.60/oz.) might be present at the Indian Shaft near surface. The writer has not formally calculated geologic or mineable reserves for the purposes of this report.

### COMPARISON WITH OTHER EPITHERMAL DEPOSITS:

The nearest significant epithermal gold deposit to the Southeaster prospect is the Cinola (Harmony) deposit, 18 km northeast. Characteristics of the Cinola deposit outlined by Champigny and Sinclair, (1982) are:

1. Small particle size of the gold - < 0.5 microns)
2. Mid-Miocene age of mineralization.
3. proximity to a major fault system.
4. Argillic alteration.

5. High porosity of the host rock
6. Spatial and possible genetic association with a rhyolite porphyry intrusion.

The Southeaster has many of these characteristics. Age of the gold mineralization is uncertain, and gold particle size is much higher than at Cinola, with abundant visible gold, and porosity is contributed by cataclastic processes and open spaces within the northwest trending shear. Argillic alteration is extreme

The Southeaster deposit shares many characteristics with productive epithermal precious metal deposits elsewhere in B.C. and the western U.S., such as strong clay and silica alteration, chalcedonic silica, banded quartz, and amethystine quartz stockworks, pronounced "nugget" effect of gold distribution, association with a regional fault or shear, and geochemical associations with mercury. Examples of epithermal deposits in the western Cordillera are given below and on the following page.

#### Epithermal Gold-Silver Deposits in British Columbia and Washington

MINE	CATEGORY	TONS	Grade	
			GOLD	SILVER
			opt	opt
Black Dome	Production 1988	207,357	0.70E	3.00E
	Reserves 1988	124,021	0.59	1.87
Al Property	Reserves 1990	1,939,000	0.157	0
	Mineable 1990	246,000	0.290	0
Baker Mine	Production	87,740	0.43R	8.46R
	Reserves	55,000	0.56R	?
Lawyers	Reserves 1988	1,938,000	0.198	7.09
Mets	Reserves	160,000	0.230	
Cinola (Babe)	Total (1991).	40,700,000	0.048	
	Mineable	26,000,000	0.072	0.09
Silbak Premier	Production	1,264,000	0.057	1.39
	Reserves	3,720,000	0.081	2.10
Cannon Mine	Production	3,000,000E	0.250E	0.50E
	Reserves	4,560,000	0.265	0.50

**GEOCHEMICAL ANALYSIS CERTIFICATE**

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: Pulp AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: FEB 13 1990 DATE REPORT MAILED: *Feb 15/90* SIGNED BY: *C. Leung* D. TOYE, C. LEONG, J. WANG; CERTIFIED B.C. ASSAYERS

Guinet Management PROJECT SOUTH EASTER File # 90-0270R Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe % PPM	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg % PPM	Ba % PPM	Ti % PPM	B %	Al %	Na %	K % PPM	W %	Au* PPB
DDH 90-10 96-97.5	1	26	50	132	.4	17	16	2549	4.91	4	5	ND	1	24	1	2	2	98	1.86	.038	4	43	2.51	43	.12	2	2.88	.03	.07	1	2
DDH 90-10 101-102	1	36	34	102	1.7	18	19	3267	5.70	4	5	ND	1	30	1	2	2	103	2.04	.044	4	25	2.49	59	.15	7	2.81	.03	.10	1	23
DDH 90-10 111-113	1	254	443	1023	1.7	10	7	713	2.30	9	5	ND	1	18	6	2	5	31	1.02	.019	2	13	1.13	41	.05	4	1.11	.01	.07	1	68
DDH 90-10 113-116.5	2	257	381	890	3.3	11	9	729	2.79	10	5	ND	1	18	7	2	2	22	1.06	.021	2	17	1.15	33	.02	3	1.01	.01	.08	1	83
DDH 90-10 116.5-119	1	36	11	124	1.5	21	21	2193	6.04	4	5	ND	1	33	1	2	2	97	.36	.049	3	43	2.71	47	.02	7	2.83	.02	.12	1	17
DDH 90-10 123-125	1	55	17	119	.9	20	22	1463	6.51	9	5	ND	1	39	1	4	2	77	.50	.052	4	37	3.00	49	.08	7	2.88	.02	.13	1	27
DDH 90-10 155-158	1	48	13	104	.4	19	20	968	5.75	2	5	ND	1	56	1	4	2	119	3.74	.046	3	53	2.07	66	.16	2	4.64	.12	.03	1	64
DDH 90-11 29-34	1	46	22	70	.2	7	10	513	3.71	3	5	ND	1	32	1	2	2	44	1.61	.044	3	11	.89	39	.06	4	3.82	1.07	.06	1	12
DDH 90-11 39-47	2	456	209	454	.8	9	5	698	2.07	6	5	ND	1	28	3	2	2	22	1.83	.017	2	14	1.11	25	.02	3	1.05	.03	.06	1	98
DDH 90-11 53-54.5	1	385	7061	5192	24.8	4	2	2012	3.48	13	5	61	1	21	24	4	2	36	1.02	.004	2	7	3.48	8	.01	2	1.97	.02	.02	1	75100
DDH 90-11 57-59	1	186	625	2288	2.7	5	2	2380	1.50	3	5	9	1	19	9	2	3	39	3.03	.007	2	11	2.35	4	.02	4	1.13	.01	.01	1	10310
DDH 90-11 98-99	2	69	313	785	1.9	10	8	1058	2.41	5	5	ND	1	17	4	2	3	39	.80	.033	2	12	.74	70	.10	2	1.38	.03	.07	1	53
DDH 90-11 112.5-113	1	46	68	230	1.0	12	19	2499	6.03	2	5	ND	1	51	2	5	2	131	2.26	.045	3	22	2.32	87	.22	2	3.92	.12	.08	1	18
DDH 90-11 146-147	18	89	95	112	1.2	28	38	1556	9.96	20	5	ND	1	34	1	5	2	70	1.26	.046	4	40	2.49	36	.08	6	2.85	.02	.14	1	98
DDH 90-11 238-239.5	3	15	17	76	2.4	21	15	769	3.98	7	5	ND	1	34	1	2	3	63	2.48	.029	2	37	1.75	35	.11	2	2.70	.38	.07	1	50
DDH 90-12 22-26	1	46	7	62	.4	11	14	918	4.69	2	5	ND	1	51	1	3	2	92	3.66	.053	3	20	1.94	58	.18	2	3.98	.14	.05	1	12
DDH 90-12 37-42	1	112	130	483	.7	15	16	1292	5.61	5	5	ND	1	82	3	3	2	94	3.60	.049	4	24	2.56	87	.11	8	4.12	.12	.14	1	230
DDH 90-12 42-47	1	64	26	67	.4	11	15	767	4.37	9	5	ND	1	59	1	2	2	44	4.29	.051	5	16	1.22	50	.04	8	3.38	.81	.15	1	16
DDH 90-12 47-48.5	2	213	348	841	.6	8	8	1426	3.06	2	5	ND	1	19	4	3	2	38	.69	.020	2	12	2.47	24	.02	6	2.03	.02	.08	1	77
DDH 90-12 48.5-55.5	1	253	1792	1395	4.3	9	11	2439	4.39	17	5	7	1	101	7	2	2	67	5.22	.038	4	15	2.76	97	.07	6	2.78	.12	.11	1	6030
DDH 90-12 55.5-58.5	1	247	1425	3316	4.7	3	1	3701	1.15	4	5	11	1	26	12	2	2	24	5.49	.002	2	9	1.92	3	.01	2	.76	.02	.01	1	9650
DDH 90-12 58.5-62	1	881	20880	8166	24.5	3	1	2726	2.79	10	5	23	1	37	40	7	2	41	1.26	.003	2	3	4.29	5	.01	2	2.07	.02	.01	1	19700
DDH 90-12 62-64	2	672	2088	3780	7.1	6	1	1602	1.24	4	5	21	1	17	16	2	2	18	1.80	.003	2	12	1.77	4	.01	2	.75	.01	.01	1	22900
DDH 90-12 64-66	1	68	70	190	.8	12	16	6645	5.46	2	5	ND	1	18	2	6	2	141	.53	.046	3	23	2.87	70	.22	2	2.83	.04	.07	1	280
DDH 90-12 67.5-68.5	1	691	625	7134	4.2	7	7	4023	3.82	5	5	13	1	13	38	6	2	86	1.29	.023	2	15	3.26	27	.10	2	2.57	.01	.03	1	9840
DDH 90-12 114-117	1	29	70	139	.9	16	21	2966	6.43	2	5	ND	1	19	2	3	2	134	.78	.041	2	32	2.45	57	.22	2	3.11	.05	.08	1	260
DDH 90-12 117-119	1	65	34	95	.7	16	19	3153	6.21	4	5	ND	1	23	2	3	2	123	1.18	.040	2	31	2.29	54	.23	2	3.36	.06	.05	1	69
DDH 90-12 131-135	1	35	47	119	.9	14	20	1956	6.42	8	5	ND	1	36	1	5	2	99	.48	.054	4	29	2.95	68	.06	5	3.16	.04	.18	1	10
DDH 90-13 66-69	1	152	57	278	.5	20	17	782	4.94	2	5	ND	1	104	3	3	2	149	2.66	.033	2	37	2.39	38	.19	2	5.30	.42	.02	1	56
DDH 90-13 84-91	1	54	17	60	.3	13	14	843	4.78	8	5	ND	1	58	1	2	2	57	2.90	.057	7	22	1.51	49	.01	11	2.32	.10	.21	1	6
DDH 90-13 91-97	1	42	12	60	.2	7	11	938	3.97	9	5	ND	1	80	1	2	2	64	2.90	.077	9	11	1.45	75	.05	6	2.53	.16	.09	1	5
DDH 90-13 97-99	2	377	81	143	.8	6	4	1671	1.71	5	5	ND	1	59	1	3	2	19	12.31	.021	4	11	.80	13	.02	3	.85	.02	.07	1	61
DDH 90-13 99-103	1	136	140	439	.9	10	15	2022	4.60	6	5	ND	1	54	3	5	2	72	5.18	.036	4	18	1.77	50	.09	9	2.47	.05	.26	1	330
DDH 90-13 103-104	2	90	45	94	.6	12	12	1331	4.84	16	5	ND	1	65	1	2	2	52	2.88	.049	5	14	1.62	41	.01	8	2.04	.05	.18	1	26
DDH 90-13 104-106	2	1594	39	50	37.3	10	9	327	3.33	11	5	ND	1	58	1	2	11	18	5.71	.011	2	9	.29	53	.03	5	1.71	.11	.15	1	320
DDH 90-13 106-111	1	176	21	148	3.7	10	14	2065	5.03	2	5	ND	1	78	1	2	2	109	.94	.047	3	16	2.41	73	.17	5	3.36	.19	.08	1	31
STD C/AU-R	18	59	40	132	7.0	67	30	961	4.11	42	22	7	36	47	19	15	21	57	.46	.095	37	55	.84	177	.06	40	1.94	.06	.14	13	515



		PPM				PPM				PPM				PPM				PPM				PPM				PPB		PPB					
		%				%				%				%				%				%		%									
JH 90-13 155.5-156	1	82	546	166	1.0	18	17	2968	5.11	11	5	ND	4	2	7	4	95	1.46	.032	2	56	1.94	93	.20	7	3.30	.08	.03	1	37	-	-	
JH 90-13 195	1	69	12	74	1.0	11	19	983	6.24	10	5	ND	1	6	1	8	2	120	4.11	.043	3	30	1.91	68	.21	13	4.47	.18	.06	1	10	-	-
JH 90-13 198	1	57	10	65	.7	12	16	916	4.88	9	5	ND	1	141	2	7	2	91	6.23	.043	4	31	2.00	127	.15	11	4.37	.32	.07	1	9	-	-
JH 90-13 209-211	1	62	20	82	.7	14	16	1076	4.76	12	5	ND	1	148	2	8	2	101	4.74	.051	5	26	1.73	132	.19	11	5.60	.38	.05	1	7	-	-
JH 90-14 47-50	1	860	2013	5870	1.5	18	14	1265	3.88	9	5	ND	1	25	39	6	2	50	1.10	.026	3	39	2.37	49	.04	5	2.14	.01	.12	2	21	-	-
JH 90-14 50-54	1	45	75	109	3.5	18	18	1411	5.40	10	5	ND	1	34	1	4	2	58	.79	.071	3	29	1.83	49	.02	7	2.29	.02	.21	1	64	-	-
JH 90-14 54-55	1	743	1598	5656	1.4	8	6	847	2.05	7	5	ND	1	20	34	4	2	29	3.59	.013	2	22	1.70	19	.03	8	1.44	.01	.05	2	23	-	-
JH 90-14 55-58	1	76	30	126	3.0	26	25	1767	6.45	16	5	ND	1	38	1	5	2	55	.39	.044	3	29	2.06	48	.01	11	2.22	.01	.18	1	42	-	-
JH 90-14 58-60.5	1	50	41	153	1.8	16	22	2557	6.23	4	5	ND	1	36	2	6	2	109	.41	.046	3	26	3.30	44	.02	15	3.37	.01	.11	1	33	-	-
JH 90-14 60.5-63.5	2	84	179	492	5.1	17	13	1583	3.63	9	5	ND	1	26	3	3	2	47	.57	.032	5	29	1.72	33	.01	6	1.61	.01	.09	1	60	-	-
JH 90-14 63.5-66.5	2	155	703	244	2.1	24	24	683	7.27	9	5	ND	1	36	2	2	2	35	.53	.025	2	23	.90	44	.04	8	1.25	.01	.18	1	37	-	-
JH 90-14 85-86	3	48	125	231	1.5	13	12	1275	3.46	12	5	ND	1	42	2	5	2	46	2.02	.026	2	29	1.52	84	.06	5	1.84	.02	.19	1	15	-	-
JH 90-14 86-88	1	69	19	89	1.1	19	20	1600	6.71	4	5	ND	1	62	1	7	2	127	1.63	.040	3	46	2.73	205	.19	6	4.01	.06	.05	1	13	-	-
JH 90-14 91.5-92.5	1	168	92	216	1.0	8	15	1525	4.45	9	5	ND	1	75	3	4	4	98	2.49	.036	4	13	1.19	37	.17	3	3.56	.17	.07	1	10	-	-
JH 90-14 104-104.5	59	100	82	331	303.8	10	14	1747	4.20	9	5	6	1	64	4	6	2	83	2.91	.034	3	13	1.23	68	.15	5	2.75	.12	.05	1	6790	-	-
JH 90-14 106-107	1	86	11	68	.8	9	16	1433	5.36	9	5	ND	1	61	1	0	4	134	2.18	.040	3	18	1.78	46	.22	3	4.03	.12	.03	2	17	-	-
JH 90-14 107-107.5	2	43	115	162	1.6	9	12	656	3.63	38	5	ND	1	53	2	2	2	55	1.83	.026	2	10	.86	51	.12	4	2.28	.08	.06	1	17	-	-
JH 90-14 107.5-110	1	73	16	104	1.0	16	22	691	6.60	18	5	ND	1	75	1	7	3	72	1.23	.025	3	33	1.27	22	.11	10	3.39	.51	.09	1	14	-	-
JH 90-14 139-140	3	94	26	74	2.2	18	22	895	6.46	18	5	ND	1	69	1	7	2	106	1.24	.045	3	35	1.95	37	.18	11	2.76	.37	.09	1	50	-	-
JH 90-14 156-158	1	62	10	64	.7	19	20	1172	5.83	10	5	ND	1	81	1	8	2	90	4.33	.042	2	31	2.13	64	.12	9	4.90	1.01	.06	3	6	50	-
JH 90-14 168.5-169	2	232	1221	1553	1.7	22	22	1587	6.24	11	5	ND	1	42	9	8	2	100	1.40	.025	2	48	2.79	38	.13	11	2.98	.13	.10	1	71	-	-
JH 90-14 223-223.5	1	326	81	122	.8	12	9	895	2.53	8	5	ND	1	60	2	6	3	59	2.44	.025	2	18	1.78	74	.14	6	3.01	.18	.05	1	14	-	-
JH 90-14 244-246.5	1	45	37	138	.7	13	13	793	4.62	8	5	ND	1	72	1	7	2	95	3.70	.042	3	23	1.52	63	.16	6	3.33	.12	.06	1	6	-	-
JH 90-15 63-65	1	59	7	109	.9	29	24	1858	7.05	9	5	ND	1	64	2	11	2	152	2.28	.046	3	79	3.07	55	.20	11	4.44	.14	.06	1	7	-	-
JH 90-15 92.5-94	1	33	27	337	.5	7	3	777	.95	3	5	ND	1	22	2	2	2	21	.86	.024	2	14	.51	22	.03	2	1.04	.02	.01	1	4	-	-
JH 90-15 95-95.5	1	27	129	99	.4	14	12	2373	3.77	7	5	ND	1	64	2	4	3	78	.90	.020	2	33	2.61	117	.11	4	2.48	.02	.04	1	5	-	-
JH 90-15 95.5-98	1	48	31	173	1.2	15	22	2878	6.07	11	5	ND	1	44	2	6	2	103	.75	.046	3	32	2.59	72	.17	7	2.80	.03	.13	1	11	-	-
JH 90-15 99-100.5	3	39	122	236	1.4	10	14	1373	4.66	14	5	ND	1	39	2	3	2	43	1.11	.032	2	19	1.93	39	.11	10	1.87	.03	.11	1	28	-	-
JH 90-15 100.5-104.5	1	85	21	70	1.6	14	23	1301	6.62	14	5	ND	1	71	2	10	3	128	1.99	.042	3	25	1.94	59	.24	8	3.84	.11	.07	1	16	-	-
JH 90-15 104.5-105.5	1	86	19	38	2.0	15	24	774	5.86	16	5	ND	1	44	1	2	3	73	1.33	.033	3	16	.77	38	.18	3	1.58	.06	.09	1	21	-	-
JH 90-16 70-72	1	80	133	356	1.2	15	18	2340	5.96	14	5	ND	1	42	3	9	2	109	3.50	.042	3	27	2.76	68	.17	5	3.92	.22	.06	1	48	-	-
JH 90-16 121-123	1	187	236	279	1.0	9	12	1211	3.86	11	5	ND	1	44	2	5	2	63	2.79	.033	3	13	1.73	36	.01	10	1.94	.03	.07	1	760	-	-
JH 90-16 123-125	1	57	36	111	.4	7	9	1136	2.86	7	5	ND	1	33	1	4	2	60	2.14	.024	2	13	1.56	27	.01	8	1.73	.02	.05	1	29	-	-
JH 90-16 128.5-131	1	73	29	145	1.5	10	14	1844	4.64	14	5	2	1	70	1	4	4	72	4.88	.044	4	17	1.70	36	.01	10	2.09	.04	.08	1	480	-	-
JH 90-16 137-141	1	58	15	71	.7	13	20	906	6.79	12	5	ND	1	59	1	5	3	77	3.74	.069	5	23	1.67	42	.01	15	2.09	.06	.09	1	9	-	-
JH 90-16 158-170	1	78	7	63	.3	14	19	637	6.13	13	5	ND	1	68	1	4	2	55	1.46	.059	5	16	3.12	43	.01	8	2.11	.16	.10	1	8	-	-
D C/AU-R	18	57	44	129	7.1	67	31	1008	4.03	42	19	8	36	47	19	15	22	58	.46	.091	36	56	.83	174	.06	40	1.92	.06	.14	11	530	1300	-