

GEOCHEMICAL SURVEY

by

Gary C. Lee, P.Eng.

November 1992

MARILYN MINERAL CLAIMS

Atlin Mining Division, B.C.

Grant Nos. 203605(4509) 203637(4541) 203628(4532)-203636(4540) incl. Grouping Doc. No. 3012891

Work done by Owners: Bradley T. White and Gary Lee

Map 104N/12W Latitude 59° 38', Longitude 133°49'

Date submitted: 1 an 20/93

GEOLOGICAL BRANCH ASSESSMENT REPORT

22,754

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INTRODUCTION

General

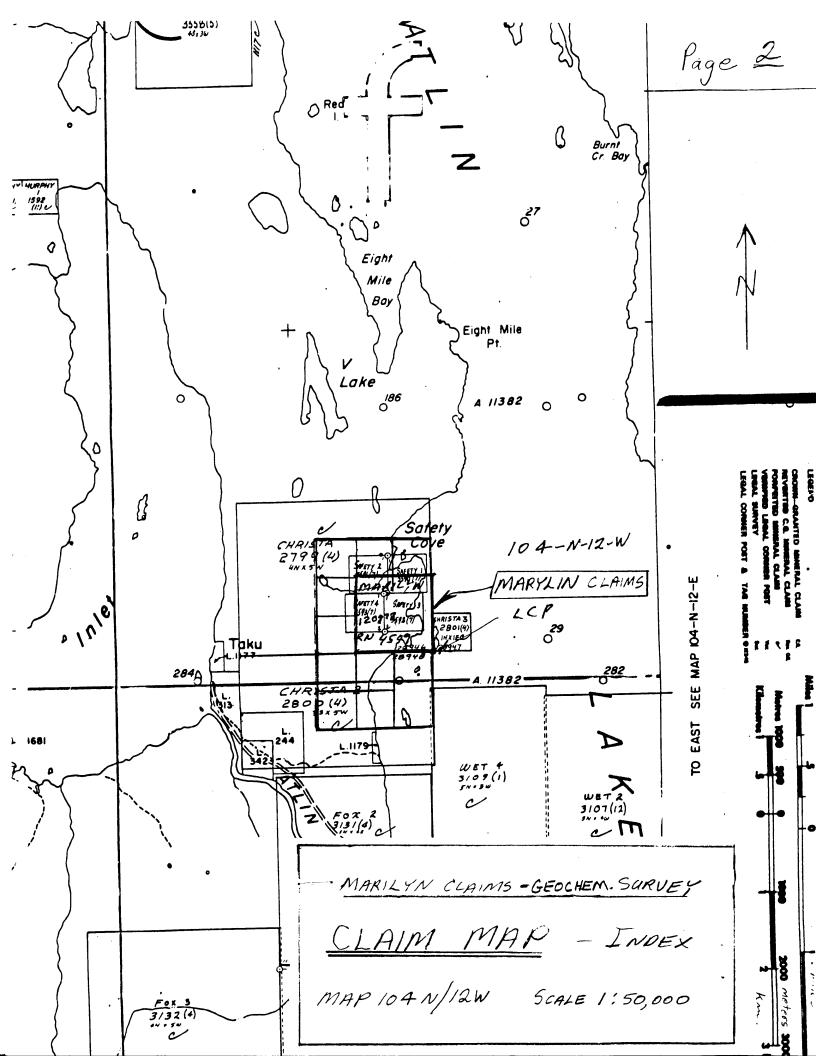
On November 14, 1992, Mr. B. white flew by chopper, from Atlin B.C., in to the MARILYN claims, a distance of approx. 9 km. During this time, a test geochemical soil sampling program was carried out across a ground geophysical target. The general location of these claims can be found on the claim map(Pg 2) and the geology maps(Pg 6&7). Specific soil sample locations relative to the L.C.P. and claim grant nos. can be found on the geochem. maps contained in the pocket. Also, included with these is a reprint of the Mag. Map as contained in the 'Magnetometer Survey' report(April, 1991) submitted in Jan. 1992.

The Claims are jointly owned by myself and Mr. white.

Location and Access

The claims are located 9 km. in a straight line northwest of Atlin. B.C. on the west shore of Atlin Lake. The location is clearly marked on the maps.

Access to Atlin is by an all-weather road connected to the Alaska Highway. Access to the claims from Atlin is by a gravel road (Fourth of July Road) 5.5 km. north of the town and thence 4.5 km. west across Atlin Lake on the ice by snowmobile or on water by boat. If one wishes to travel the complete distance by air, boat or snowmobile, this can be accomplished by departing from the shoreline in downtown Atlin and travelling a distance of 9 km.



History

There is no evidence of any physical work on the Marilyn Claims. The only past activity has been some prospecting and staking which probably occurred as a result of the "lively" looking rocks along or just inside the shoreline. The government geologists obviously noticed this as shown by their sampling in which a couple of samples were anomalous in some of the precious and base metals. This can be seen on Mihalynuk's map(Open File Map 1992-8) reproduced on page 7 for sample nos. MM91-13-9 & 12. Unfortunately, standard prospecting techniques have been very limited in the past, as indicated by the ground Magnetic Map where most, if not all the interesting structure is covered by shallow overburden where the magnetic response is strong.

Since the discovery of gold in 1898-99, Atlin has been a producer of placer gold until the present. During this time, a few shafts (e.g. Yellow Jacket on Pine Creek, and the Beavis near Atlin) have been sunk in bedrock with the purpose of evaluating occurrences of lode gold. Over the past 10 years there have been numerous junior companies plus a couple of majors (e.g. Homestake on the Yellow Jacket property at Pine Creek) exploring in the area particularly to the east of Atlin.

The closest significant activity to the Marilyn claims is the Beavis Mine property approximately 6 km. to the southeast across Atlin Lake(see Geo. map, page 6). Here, the first work reported was underground development performed in 1904. As reported in Archer-Cathro's Beavis Mine Property Study, July 15, 1987, by Mr. N. P. Phillips, the "workings consist of a steeply-inclined shaft, lateral development on two levels (55 feet and 110 feet below surface), and a short winze from 55 Level to surface. The shaft is believed to have been sunk to about 150 feet below surface." Gold occurrences in the Beavis will be mentioned in the economic geology section as outlined during recent (1987) shaft rehabilitation by B.Y.G. Resources Ltd.

Topography

470 230 metres

The elevation on the area surveyed ranges from 2200 to 2400 feet above sea level. With the exception of a few steep cliffs on Atlin Lake, the area is easily traversed. To the west of the survey area, the slopes begin to steepen, peaking at an elevation of 3000 feet (see copies of photographs, page!).

Field and Laboratory Procedure

An existing grid established for the April, 1991 Mag. Survey was utilized for the soil sampling. This consisted of a baseline(7300W) running true north with grid lines running east-west (see plans in pocket). The lines were run in at 100 metre spacing. Lines are flagged only (no blazing or cutting). The L.C.P. (Grant No. 203605(4509)) is located on the south end of an island at 7000N. 7000W. A total of 800 metres over 4 lines was sampled. The location of the soil lines can be seen by inspecting the geochem. maps contained in the pocket.

15-25 cm

Soil holes were dug with a grub hoe varying in depth from 6 to 14 inches at 10 metre intervals. A total of 83 samples were taken. Most samples were taken from a redish coloured sandy silt occurring just below the organic layer. The exception to this was: mostly sand at L 7200. 7410w & 7420w; L7300. 7400w & 7410w; L 7400. 7400w & 7410w; L 7500. 7410w; the following were organics sometimes with angular rock chips and occassionally black muck at L 7200. 7550w; L7300. 7450w. 7460w & 7510w; L7400. 7460w; L 7500. 7400w. 7430w-60w. 7500w. & 7520w-70w.

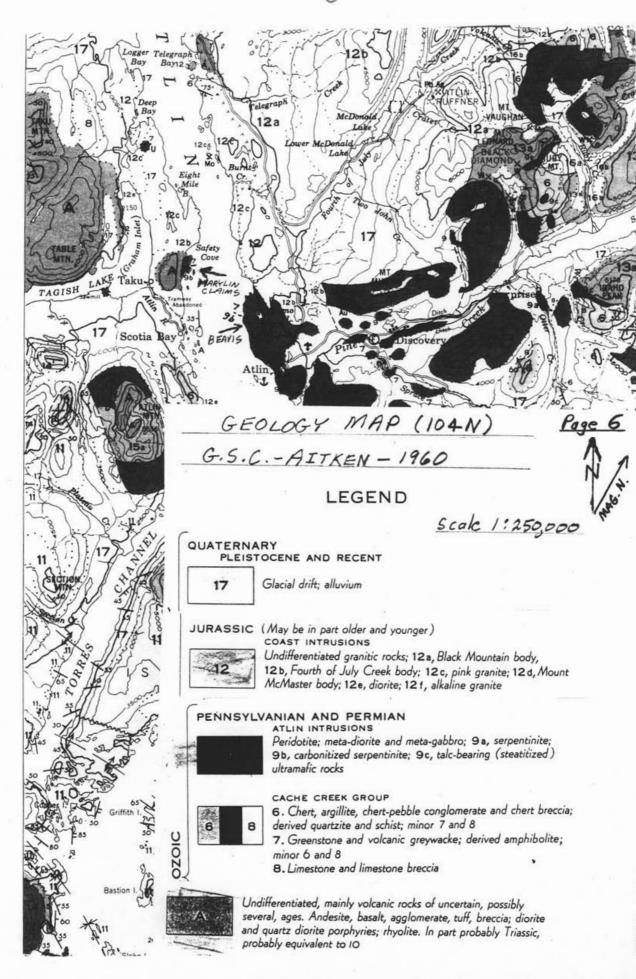
The samples were seived keeping the -80 fraction for analysis. An Aqua regia digestion with AA finish was employed in the lab. for all elements plus a 15 gram sample was fire assayed for gold with an AA finish. Gold, silver, copper, zinc, lead, arsenic, and antimony were tested for. Northern Analytical Laboratories Ltd., 105 Copper Rd. in Whitehorse conducted the analysis.

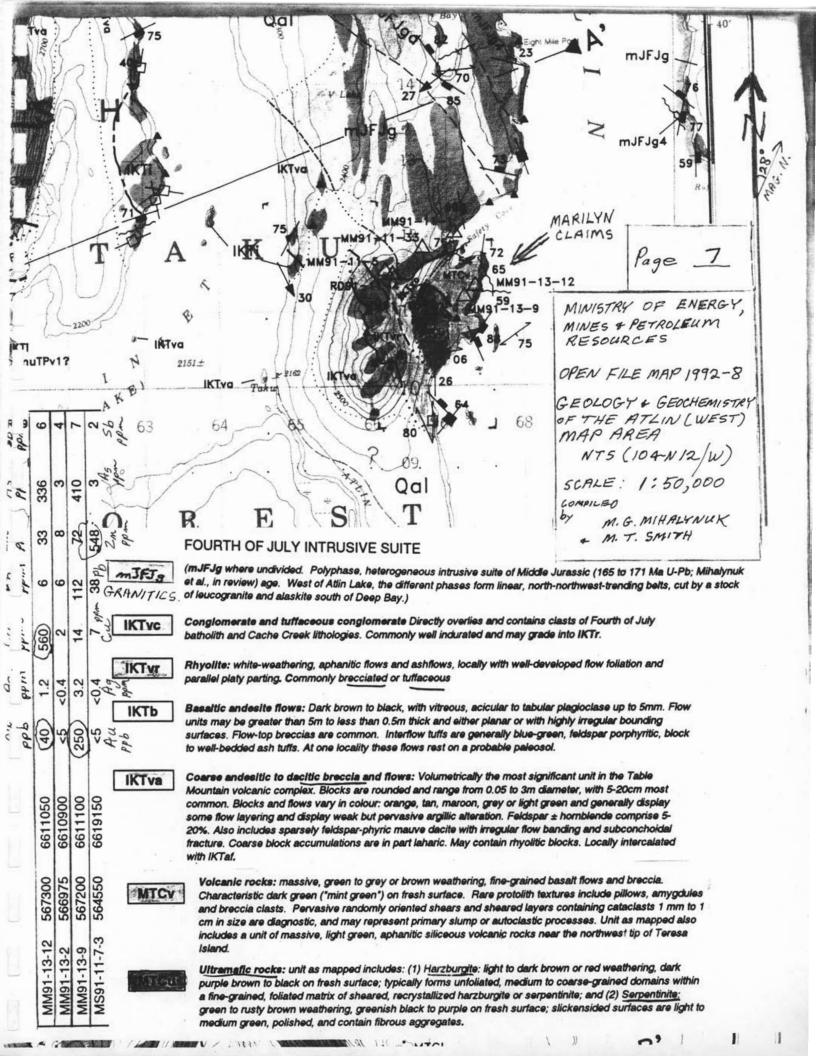
ECONOMIC GEOLOGY

Aitken's geology map (1960) and the more detailed geology map (1992-8) compiled by Mihalynuk and Smith are shown on page 6 and 7 respectively. A description of the rock types occurring in the general area of interest is reproduced on these maps and will not be repeated here.

of more general interest to the east on Pine Creek, C. H. Ash and R. L. Arksey have noted in their paper entitled The Listwanite-Lode Gold Association in British Columbia - "Linears defined by aeromagnetics lows in serpentinite may delineate zones of carbon-atization. Magnetite formed during the serpentinization of ultramafic rocks produces a strong magnetic signature. Carbonatization results in the destruction of magnetite, creating zones of reduced magnetic susceptibility. The application of aeromagnetic lows as an exploration tool in delineating zones of carbon-atization in ultramafics has been discussed by Gresens et al (1982). This approach has been applied by Homestake Mineral Developement Co. in the Atlin camp and has proven successful (D. Marud, personal communication, 1989)."

Seven miles to the west of Homestakes's Pine Creek (Yellow Jacket) property is the Beavis property (see geology map Pg. 6). According to the report by M. P. Phillips in Archer-Cathro's Beavis Mine Property Study, July 15, 1989, the "geological setting and mineralization at the Yellow Jacket closely resemble those at the Beavis." "Two gold bearing veins are exposed in the underground workings and both are confined to the porphyry dyke." "Silicification is most intense at the junction of faults or where there is a change in strike." Also, samples "taken from the mine dumps containing the greatest amount of grey quartz (25%) as opposed to white quartz returned the highest assays (0.870 oz/ton gold and 1.87 oz/ton silver)." "The highest assay returned from samples taken from underground workings was 0.745 oz/ton gold with 0.47 oz/ton silver across 3.2 feet from No. 2 vein on the 55 Level





crosscut." A more detailed geological description can be obtained from the Archer-Cathro report.

As seen by inspecting the more detailed (1:50,000) government geology map on page 7, the area tested geochemically thus far is only a small part of the area of overall interest. The close proximaty of the andesitic rocks, rhyolites, ultramafic complexes and volcanics in the area all require close examination with geophysics and geochem. Of general interest, Rick Diment, Geologist (Noranda Exploration Co. Ltd.) who worked on the Pine Lode property (Pine Creek) stated that andesites near or contacting ultramafic complexes and with intensive shearing or faulting are excellent places to explore for gold.

PURPOSE

By inspecting the Mag. map, it can be seen that there is a pattern of magnetic lows crossing L 7200N to L 7700N approximately between stations 7500W and 7600W. The purpose of this survey is to test by geochem. soil sampling, across these lows in order to ascertain its value as a prospecting tool.

RESULTS

The results can be seen on the seven geochem maps contained in the pocket. Gold, silver, copper, zinc, lead, arsenic and antimony have been plotted and contoured individually for each map. when these individual maps are overlain the Mag. map, correlation of the geophysical and Geochem. data can be made quite easily. The contour interval is 20 ppm for copper, zinc, arsenic and antimony; 10 ppm for lead; 20 ppb for gold and 0.5 ppm for silver.

INTERPRETATION AND CONCLUSIONS

When the geochem maps are overlain each other or on the Mag. map an interesting correlation occurs. The highest gold values on L 7300N at 7530W and 7590W and on L 7500N at 7560W occur exactly on mag. lows. This fits the geological model mentioned in the Economic Geology section and hence is an excellent place to explore for gold. On L 7300N all the other elements have high readings either on or slightly below station 7530W. Its interesting to note that on L 7300 at the west limit of sampling (7600w) not only are high gold and copper values occurring but further to the west there is an abrupt change in the general magnetic pattern. This could indicate an area of faulting or shearing and with the pattern of mag. lows developing between 7740W and 7800W, L7300N should be extended and completely sampled. anomaly showing highs in copper, zinc, lead, arsenic and silver trending in a north-south direction crosses, for the most part, all four lines at or near station 7450W. These are also on or near mag. lows and should be investigated. It is concluded the soil geochemistry is a good indication of what elements are to be found in the near bedrock since the soil geochem anomaly patterns so closely correlate to those anomaly patterns of the Mag. survey. It is expected that gold and lead would have the least mobility, and hence should be the closest to the source of all the elements tested for. Since the anomalies occur on a very gentle down hill slope, one should keep this mobility in mind when choosing a test site based on geochemistry alone. If possible, the mag. should be used in conjunction with the geochem, with the mag. used to "fine tune" the test site especially if one is limited to small scale excavations.

RECOMMENDATIONS

- ent correlation, and the anomaly systems are all open to the north, west and south, the grid should be extended in these directions.

 Geochem. and geophysics should be expanded in order to cover all anomalies.
- 2) Preferably, with the above completed, trenching and/or drilling commence.

Respectfully submitted.

STATEMENT OF QUALIFICATION

I, GARY C. LEE, of the City of Whitehorse, Yukon Territory, DO HEREBY CERTIFY that:

- 1) I am a self-employed Geological Engineer.
- 2) I am a graduate of the University of Toronto, Toronto, Ontario, with a degree in Applied Science Geological Engineering (Mineral Exploration option).
- 3) I am a member of the Professional Engineering Associations of both the Yukon and Ontario.
- I supervised and carried out the work described in this report.

Gary C. Lee, P.Eng.

Date: Dec /92



LOOKING WEST - MARYLIN CLAIMS IN BACKGROUND



MARILYN MINERAL CLAIMS

ATLIN MINING DIVISION B.C.

Grant Nos. 203605(4509) 203637(4541) 203628(4532) to 203636(4540) incl.

Grouping Doc. No. 3012891 Nov./Dec. 1992

STATEMENT OF COSTS - GEOCHEMICAL SURVEY

FIELD	\$
Sample collection and handling 2 days @ \$200.00/day	400.00
Helicopter Rental	500.00
Mob. and Demob.	75.00
Laboratory Costs-Northern Analytical Lab. Ltd. (83 samples- 7 elemts&fire- \$18.73/sample)	1554.38
REPORT	
Wap Preparation including plotting and contouring Seven Dilars - 2 days @ 275.00/day	550.00
Data Interpretation and Report Writing 2 days @ 275.00/day	550.00
Report and Map(? Dilars) Reproduction Integraphics Ltd	300.00
TOT AL	3,929.38
Meals & accommodation	50,00
TOTAL 3,	979.38
	-



25-Nov-92date

Assay Certificate

page 1

Placer Dome

A MA

WO#13976

ANTIMONY (Sb)

Sample# LINE STATION	Au ppb	Ag ppm	Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	
72N 7400W	(8)	<0.1	7	3	32	14	25	
72N 7410W	(12)	0.2	10	3	21	36	33	
72N 742úW	(20)	<0.1	10	2	37	29	32	
72N 7430W	(13)	<0.1	4	1	24	18	33	
72N 7440W	45	0.2	53	1	16	40	34	
72N 745CW	63	0.2	110	8	96	4 6	44	
72N 746GW	(24)	0.2	29	6	71	46	55	
72N 7470W	6	0.3	20	3	34	22	55	:(0
72N 748CW	45	0.4	22	39	38	79	56	W
72N 7490W	27	0.3	99	1	29	67	38	
72N 7500N	45	0.3	61	3	42	93	69	
72N 751:)W	100	0.4	54	4	22		50	
72N 752'JW	(9) (18)	0.5	51	1	133	61	52	
72N 7600W	(19)	0.9	95	12	149	81	5 5	
72N 7540W	123	0.7	74	13	28	53	54	
72N 7550W	48	0.5	54	11	46	84	54	
72N 756UW	52	0.5	33	7	32	63	30	
72N 7570W	(18)	0.1	28	5	84	43	23	
72N 7580W	52 18 36	0.6	10	15	21	49	27	
72N 7590W	35	0.1	20	4	36	46	40	
72N 760')W	30	0.4	4	12	47	22	56	
73N 7400W	<u> </u>	0.1	4	7	26	26	30	
73N 7410W	(14)	0.1	7	4	31	22	37	٠,
73N 7420W	(20)	<0.1	5	5	30	42	29	`.
73N 7430W	<u> </u>	< 0.1	7	3	24	26	33	
73N 7450W	54	0.3	29	23	162	48	42	_ 1
73N 746UW	(17)	8.0	103	7	131	42	31	:
73N 7470W	77) 4 (B) 95	0.5	11	15	45	32	28	A /
73N 7480W	(18)	0.4	14	15	43	13	29	W -
73N 7490W	(8)	0.5	21	13	67	95	62	7
73N 7500W	35	0.4	12	8	41	49	36	l
73N 7510W	105	0.9	18	16	29		28	· ·
73N 7520W	30	1.3	26	27	85	136	84	
73N 7530W	_ 123	1.1	54	112	175	_ 467	71 <==	_/
73N 7540\V	4.21	0.3	. 8	, 18	52	54	22	
73N 755CW	26	0.1	20	9	63	26	47	1 /
73N 7560W	(12)	0.4	23	6	80	31	46	
	9							G

Certifier by CHyo Kku





25-Nov-92date

Assay Certificate

page 2

Placer Dome

WO#13976

Samp • INE	ole# Station	Au ppb	Ag ppm (Cu ppm	Pb ppm	Zn ppm	As ppm	Sb ppm	
	7570W	64	. 0.4	9	12	49	43	68	
	7580W	60	<0.1	9	5	6 8	7	27	
	7590W	255	0.1	13	10	47	34	30	
	7600W	90	0.1	129	3	6	- 27	59	
	7400W	38	0.2	234	6	30	20	29	
	7410W	(16)	0.1	19	<1	63	34	23	•
	7420W	(<5)	0.1	30	10	84	47	44	
	7430W	43	0.5	54	7	119	53	53	
	7440W	· (23)	0.5	40	15	137	136	62	
	7450W	36	0.8	51	14	86	87	94	7 /
	7460W	33 🐪	15	140	<1	45	72	46	, , , , ,
	7470W	30	2.4	27	52	107	236	68	
	7400W	(14)	0.3	19	10	47	37	29	
	7490W	26	1,6	51	^	69	182	29	
	7500W2_	(15/2)	0.6>0.4	23710	22 1	59	262-1/	02 -	70 ELAVERAGE
₹74N		(15/>2!	0.4	23/16	1	⁵⁹ >52	60 27 6	58	OCTOBIAGE
	7510W	72	0.2	30	11	. 27	44	64	$\langle \cdot \rangle$
	7520W	29	0.4	51	22	57	25	49	•
	7530W	66	0.1	32	11	55	75	93	_
	7540W	34	0.5	21	13	73	169	92	
	7550W	39	1.1	10	28	140	126	54	
	7560W	(15)	0.9	13	15	50	81	44	
	7570W	(15) (14)	0.1	14	10	49	13	30	
	7500W	(14)	0.2	10	17	35	68	36	
	7600W	31	0.4	22	7	23	84	57	
	7/00W	67	0.1	13	2	15	16	29	5 84
	7410W	(14)	<0.1	2	22	94	98	24	· · · · · · · · · · · · · · · · · · ·
	7420W	(6)	0.7	29	12	91	5	36	\A
	7430W	24	0.3	29	<1	27	12	25	W 0
	74 10W		1.3	50	52	100	49	62	
	7450W	41	0.5	40	10	73	31	37	
	7460W	(21)	1.0	31	7	59	46	86	
	74T0W	(20)	0.3	3	17	42	30	32	
	7400W	(1) (6) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	0.1	12	7	31	<1	38	
	7490W	(13)	0.2	8	6	47	32	21	
	7500W	711	0.3	13	5	210	6	10	
	7510W	(1)	0.5	16	6	40	57	43	

Certified by ChyoKk

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25-Nov-92date

Assay Certificate

page 3

Placer Dome

WO#13876

| Sample#         | Au ppb         | Ag ppm | Cu ppm | Pb ppm | Zn ppm | As ppm      | Sb ppm |        |
|-----------------|----------------|--------|--------|--------|--------|-------------|--------|--------|
| 75N 7520W       | 36             | 0.3    | 31     | 19     | 56     | 25          | 34     |        |
| 75N 7530W       | 41_            | 0.1    | 13     | 10     | 55     | 40          | 36     | ₹.     |
| 75N 7540W       | (15)           | <0.1   | 25     | 3      | 22     | 37          | 29     | Z      |
| 75N 7550W       | 41<br>15<br>25 | 0.1    | 91     | 1      | 12     | <1          | 32     |        |
| 75N 7560W       | 120            | 0.3    | 15     | 4      | 18     | 44          | 19     |        |
| 75N 757(W/ OGEP | <u>(10</u> )   | 0.4    | 23     | 3_     | 25     | 165         | 34     | ,<br>- |
| 75N 7590W       | 39             | 0.4    | 16     | 9      | 37     | <b>1</b> 81 | 32     |        |
| 75N 7690W       | (21)           | 0.3    | 22     | 5      | 60     | 24          | 41     |        |
| 75W 758CW       | (13)           | 0.3    | 13     | <1     | 69     | 30          | 52     |        |

