Suite: 401 - 134 Abbott St., Vancouver, B.C. Canada: V6B 2K4 (604) 683-8271

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| Title:           | Report on Geochemical Work on the<br>Ruth Property   |
|------------------|--|
| Claims:          | Ron 412(6) (20 units)<br>Dawson 566(2) (Reverted Crown Grant Mineral Claim)<br>Mabel 567(2) (Reverted Crown Grant Mineral Claim) |
| Mining Division: | Cariboo  |
| NTS Location:    | 93H/4E   |
| Latitude:        | 53° 09'N   |
| Longitude:       | 121 <sup>0</sup> 39'W  |
| Owner:           | Parklane Explorations Ltd.   |
| Operator:        | Parklane Explorations Ltd.   |
| Consultant:      | Nevin Sadlier-Brown Goodbrand Ltd.   |
| Authors:         | J.F. Reader, E.I.T., and A.E. Nevin, Ph.D.,P.Eng.  |
| Dates of Work:   | March 17 - April 4, 1980   |
| Date of Report:  | April 18, 1980   |



GEOLOGISTS AND ENGINEERS

SPECIALISTS IN MINERAL AND GEOTHERMAL RESOURCE EXPLORATION

## SUMMARY

Nevin Sadlier-Brown Goodbrand Ltd. conducted a soil geochemical survey, in conjunction with a trenching program, on the Ruth property on Hardscrabble Creek in the Cariboo Mining Division, on behalf of Parklane Explorations Ltd. This report is for submittal under the Mineral Act Regulations to apply assessment work.

The Ruth property is a group that consists of the Ron 412(6), Dawson 566(2) and Mabel 567(2) mineral claims and totals 22 units centred approximately on latitude  $53^{\circ}$  09'N and longitude  $121^{\circ}$  39'W. They are owned by Parklane Explorations Ltd.

The claims lie within the Proterozoic meta-sediments of the Quesnel Highlands on the edge of the Interior Plateau. The property is underlain by argillites, phyllites and quartzites tentatively assigned to the Issac Formation. This unit is common to the Cariboo Gold Quartz and Mosquito Creek gold mines near Wells. Mineralization in these mines and in the old Hardscrabble Creek scheelite mine on the property is within clusters of sheared quartz veins and consists primarily of scheelite, gold, galena, chalcopyrite, pyrite and arsenopyrite.

A total of 97 soil samples (B horizon) and 6 rock samples were taken along a freshly scraped road cut and along trenches.

Soil samples were assayed for lead, arsenic, tungsten and gold. Rock samples were assayed for tungsten, lead, zinc, silver and gold. Analyses were carried out by Chemex Laboratories in North Vancouver, B.C.

Anomalous lead, arsenic and tungsten values were obtained in several areas on the property. These are attributed to the probable presence of mineralized quartz veins near the anomalous zones. Quartz veins were located proximal to some of these anomalies by surface mapping. Gold presence was below the detection limit (10 ppb) of the analyses.

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#### 1.0 INTRODUCTION

## 1.1 Terms of Reference

This report is prepared at the request of Parklane Explorations Ltd. for submittal to the Ministry of Energy, Mines and Petroleum Resources as required under the Mineral Act Regulations to apply assessment work. The report outlines a soil geochemical survey performed in March, 1980 on the Ruth Group of claims in the Cariboo Mining Division.

Nevin Sadlier-Brown Goodbrand Ltd. has prepared a previous report on this prospect, by J.T. Crandall, P.Eng., dated August 31, 1979, which was reproduced in the Prospectus of Parklane Explorations Ltd. dated November 1, 1979.

#### 1.2 Location and Access

The property is located on the NTS 93H/4E, 1:50 000 topographic sheet at latitude  $53^{\circ}$  09'N and longitude  $121^{\circ}$  39'W (see Figure 1). Access from Quesnel is via Highway 26 to Wells (about 100 km) and then north on dirt road about 6 km to the property. Two dirt roads cross the property and access elsewhere is by foot.

## 1.3 Terrain

The Ruth group lies on the north side of the Willow River and straddles most of Hardscrabble Creek. The elevation of the Willow River is approximately 1150 metres and maximum relief on the property is 300 metres. The property is well drained via a series of small seasonal creeks most of which are tributaries of either Hardscrabble Creek or Porcepic Creek both of which drain into the Willow River. Vegetation is dense forest consisting of small to medium size conifers and trends to minor deciduous on the river terrace.

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#### 1.4 Property Definition

The Ruth Group mineral claims are: Ron (412)(6), consisting of 20 units and two reverted Crown Grant mineral claims, the Dawson (566(2)) and the Mabel (567(2)) for a total of 22 units (see Figure 2). Assessment in this report will apply to the group.

The mineral claims are owned by Parklane Explorations Ltd. of 1004 - 595 Howe Street, Vancouver, B.C.

#### 1.5 Regional Geology

The Wells-Barkerville area is a well known gold camp that lies within the Quesnel Highland in the Interior Plateau physiographical region. The property is underlain by metamorphosed sediments tentatively assigned to the Issac Formation of Proterozoic Age. The rocks exposed in this area lie on the northeastern limb of the south easterly trending Lightning Creek Anticlinorium. The regional foliation strikes northwesterly.

#### 1.6 Property Geology

The Ruth property is almost entirely overlain with soil and glacial cover. In many areas the depth of overburden is in excess of 5 metres. Bedrock is exposed primarily in trenches and along road cuts, and has been mapped on four levels within the presently abandoned Columbia Tungstens Company's Hardscrabble Mine. The mine workings lie within grey fissile quartzites, black to grey argillites and sandy impure limestones (Stevenson, 1941 and Little, 1959). Contacts are gradational. The rocks are highly altered and severely sheared and faulted. Rocks exposed in road cuts and trenches consist mainly of black to grey-green (black predominant) argillite grading to phyllite and

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schist in places and with periodic zones of badly sheared quartzite.

Foliation within the mine is reported striking from 60 to  $140^{\circ}$  dipping northerly, usually from 25 to  $50^{\circ}$ , but sometimes to nearly vertical. Dips measured in road cuts and trenches strike variably to the east or north-east and dip to the north from 30 to  $55^{\circ}$ .

### 1.7 Previous Exploration

The presence of placer scheelite on Hardscrabble Creek was noted first in 1904. Since the initial discovery Hardscrabble Creek has probably been extensively explored for placer deposits. Between 1904 and 1908 the first shaft was placed on the Mabel and Dawson claims. By 1941 a total of 1600 feet of cross cutting and drifting was accomplished on four levels. The majority of mining was performed by the Columbia Tungstens Company Ltd. who held eleven claims including the Mabel and Dawson. Since 1942 no significant exploration or exploitation has taken place and the mine workings are now inaccessible. The Ron Claim was staked in 1977 and minor work by V.J. Lesperance including trenching and road improvement and a 45 metre "X-Ray" diamond drill hole constitute the only recent exploration work on record. Hard information based on this recent work is not available.

#### 1.8 Work Completed

A total of 97 soil samples for chemical analyses were collected along a freshly gouged road cut which traverses the property and along the trenches dug during the week of March 17-23, 1980. The control on the sampling was with hip-chain and compass. Samples were taken from nine of the twenty-two claim units.

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#### 2.0 GEOCHEMICAL SURVEY

## 2.1 <u>Sampling Rationale</u>

The geochemical soil sampling took place in conjunction with a trenching program in March, 1980. This intermediate sampling program was designed to detect unusual metal concentrations along one line which borders Hardscrabble Creek and traces along the moderately steep, western side of Hardscrabble Mountain. Mineral deposits above Hardscrabble Creek on the mountain might be detectable by downhill dispersion of mineralized detritus or of metal ions. A second dimension to this one line of sampling is provided by sampling along trenches in the area.

## 2.2 Sampling Method

The cut bank of the access road leading up Hardscrabble Creek was freshly scraped and widened by Caterpillar D-8, providing access to fresh soil horizons. Trenches were cut with the same machine. Overburden in the area consists of a well developed A horizon on drained and densely wooded slopes underlain by a variably present ochre B horizon which overlies either glacial till of various thickness or decomposed rock of variable thickness or both.

Samples were taken from the bottom of the B horizon avoiding any humic fraction present.

#### 2.3 Discussion

Figure 3 shows the location of the roads and trenches on the Ruth property. Samples were taken in all trenches and along the road between trench number one and trench number four.

Profiles of lead (Pb), arsenic (As) and tungsten (W) assays are presented in Figures 4 and 5. Gold (Au) soil assays were generally below the detection limit.

Inspection of frequency histograms establish the following categories of anomaly in the area:

| Pb | Background | <30             | ppm |
|----|------------|-----------------|-----|
|    | Moderate   | 30 - 45         | ppm |
|    | Anomalous  | →45             | ppm |
| As | Background | <20             | ppm |
|    | Moderate   | ≥ <sup>20</sup> | ppm |
| W  | Background | ≺4              | ppm |
|    | Anomalous  | ≥5              | ppm |

Anomalous metal concentrations occur sporadically throughout the sampled area. Most of these are one-sample anomalies and are considered to be less significant than those zones where samples register moderate or anomalous concentrations. The significance of anomalies is also considered more important where more than one element registers an anomalous response.

Gold in the Hardscrabble mine occurred only rarely in quartz veins barren of economic grades of tungsten. Gold in the nearby Cariboo Gold Quartz mine and others in the area is accompanied by arsenopyrite. For the purpose of analysing the present data arsenic anomalies appearing alone (not co-variant with lead or tungsten) are considered to be possible indicators of the presence of gold in the subcrop.

Using the above criteria four anomalous zones can be considered well developed. <u>Anomaly one</u> is located near trench one and is nearly 300 metres wide. Less than two hundred metres south of trench one, limonite stained quartz outcrops along the road cut.

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The zone is characterized by anomalous lead, arsenic and tungsten along the road and anomalous lead and tungsten along trench number one.

<u>Anomaly two</u> is characterized by the highest lead assays on the property. The lead anomaly is complimented by a tungsten anomaly and straddles a badly sheared quartzite outcrop on the road. High lead and arsenic counts are observed in both trenches two and three south of the anomaly.

<u>Anomaly three</u> is a zone of high arsenic both on the road and in trench five. It could be associated with quartz boulder float observed in trench five.

<u>Anomaly four</u> is a zone, two hundred metres wide, of high lead and arsenic assays. This zone is entirely within a black fissile argillite containing siliceous stringers throughout. The significance of this anomaly is unclear.

A general trend of higher metal assays is noticeable in areas of visible outcrop. It is possible that some anomalous metal zones are due to a thinning of overburden rather than due to the presence of significant mineralization. However, metal anomalies, especially anomalies one and two, appear to be associated with the presence of guartz veins of considerable size.

The erratic, rather than extensive trend of the anomalies is likely due to the nature of mineralization which is confined to narrow quartz vein clusters as opposed broad ore bodies. - 7 -

## 3.0 CONCLUSIONS

Lead, arsenic and, to a lesser extent, tungsten are present in anomalous concentrations in soil on the Ruth property. Gold does not register in soil analyses. Four clearly anomalous zones are indicated well above the location of the old Hardscrabble mine. These anomalies probably reflect the presence of mineralized quartz veins beneath the overburden. The presence of an up-slope continuation of mineralization would constitute and important discovery on the Ruth property. Future geochemistry should be conducted with the fact in mind that variable thicknesses of overburden in the area might produce significant variations in metal concentrations in soil that could be mistaken for indicators of mineralization in the subcrop.

Respectfully submitted

John F. Reader, E.I.T.

ANDREW F BEIT'S

Andrew E. Nevin, Ph.D., P.Eng.



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## LOCATION MAP

RUTH GROUP

Parklane Exploration Ltd.

Figure 1



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CLAIM MAP

RUTH GROUP

Parklane Explorations Ltd.

Figure 2







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## REFERENCES

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- Little, H.W. Tungsten Deposits of Canada, Geological Survey of Canada, Econ. Geol. Ser. No. 17, 1959.
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- Sutherland Brown, A., Geology of the Antler Creek Area, Cariboo District, British Columbia; B.C. Dept. Mines, Bulletin No. 38.

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# APPENDIX A

# ITEMIZED COST STATEMENT

| I               | Fees for Per   | sonnel  | (March 17 - April 4,              | 1980)                     |                       |               |
|-----------------|----------------|---------|-----------------------------------|---------------------------|-----------------------|---------------|
| Name            | <u>Title</u>   | Days    | Duration                          | Rate                      | <u>Total</u>          |               |
| J.F. Reader     | E.I.T.         | 6       | March 18, 19, 20<br>April 2, 3, 4 | \$240                     | \$ 1440               |               |
| A.E. Nevin      | P.Eng.         | 1       | April 3, 4                        | \$480                     | 480                   |               |
| V.J. Lesperance | e Assistant    | 3       | March 18, 19, 20                  | \$ 60                     | <u>180</u><br>\$ 2100 | \$ 2100.00    |
| II              | Travel to ar   | d from  | property and during w             | ork                       |                       |               |
| BowMac Truck Re | ental (3 days  | ;)      |                                   | \$138.83                  |                       |               |
| Airfare and tax | ki (Vancouver- | Prince  | George return)                    | <u>159.60</u><br>\$298.43 |                       | 298.43        |
| III             | Accomodation   | and Li  | ving Expenses                     |                           |                       |               |
| 3 days Hubs Mot | el at Wells,   | B.C.    |                                   | \$ 53.55                  |                       |               |
| Food            |                |         |                                   | 14.85                     |                       | 60 <b>I</b> 0 |
|                 |                |         |                                   | \$ 68.40                  |                       | 68.40         |
| I۷              | Report Costs   |         |                                   |                           |                       |               |
| Drafting        |                |         |                                   | \$108.00                  |                       |               |
| Typing          |                |         |                                   | 96.00                     |                       |               |
|                 |                |         |                                   | \$204.00                  |                       | 204.00        |
| ۷               | Disbursement   | s       |                                   |                           |                       |               |
| Expendable Supp | lies           |         |                                   | \$ 20.00                  |                       |               |
| Geochemistry So | oil Analyses ( | 97 samp | les)                              | 955,53                    |                       |               |
|                 |                |         |                                   | \$975.53                  |                       | 975.53        |
|                 |                |         | GR/                               | ND TOTAL                  |                       | \$ 3646.36    |
|                 |                |         |                                   |                           |                       |               |

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## APPENDIX B

## QUALIFICATIONS OF THE AUTHORS

I, John F. Reader, hereby certify that:

- My residence address is 3945 Moscrop Street, Burnaby,
  B.C., my office address is 4th floor 134 Abbott Street,
  Vancouver, B.C., V6B 2K4; and that I am a Geological
  Engineer by occupation.
- 2. I hold a B.A.Sc. in Geological Engineering from the University of British Columbia. I have been practicing my profession since June, 1979, and am a member of the Association of Professional Engineers (Geological) of British Columbia as an Engineer-in-Training.
- 3. I conducted the work described in this report.

L Read

John F. Reader, B.A.Sc. E.I.T.

## APPENDIX B (cont'd)

## QUALIFICATION OF THE AUTHORS

I, Andrew E. Nevin, hereby certify that:

- 1. My residence address is 402-1905 Robson Street, Vancouver, B.C., my office address is 4th floor - 134 Abbott Street, Vancouver, B.C., V6B 2K4; and that I am a Geologist by occupation.
- 2. I hold a B.Sc. in Geophysics from St. Lawrence University, an M.A. in Geology from University of California, Berkeley, and a Ph.D. in Geology from University of Idaho. I have been practicing my profession since 1961, and I am a member of the Association of Professional Engineers (Geological) of the Province of British Columbia, and a Registered Professional Geologist in the State of Idaho.
- 3. The work described in this report was conducted under my direct supervision.

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0 F ANDREW E. NOVIN BRITISH LUME

Andrew E. Nevin, Ph.D., P.Eng.



APPEND1X C

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Road #40

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|  | CHE                    | EMEX            | LA      | BS LTD.            | 212 BROOKSBAN<br>NORTH VANCOUVE<br>CANADA<br>TELEPHONE: 94<br>AREA CODE:<br>TELEX: 04 | K AVE.<br>ER, B.C.<br>V7J2C1<br>94-0221<br>604<br>-352597 |
|--|------------------------|-----------------|---------|--------------------|---|---|
| · ANALYTICAL CHEN                        | AISTS • (              | GEOCHEMISTS     | • 8     | EGISTERED ASSAYERS | «   |   |
| C  | ERTIFICA               | TE OF A         | NALY    | 'SIS               | CERTIFICATE NO.   | 52461   |
| TO: Nevin Sadl<br>401 - 134              | ier-Brown<br>Abbott St | Goodbradn<br>•, | 1td.,   |                    | INVOICE NO.   | 35251<br>March 25/80                                      |
| vancouver,<br>V6B 2K4<br>ATTN: John Read | er                     | ·               |         | • .                | ANALYSED  | March 31/80   |
|  | PPM                    | PPM             | PPM     | PPB                |   |   |
| SAMPLE NO. :                             | Pb                     | As              | W       | Au                 |   | ·····   |
| Road #41                                 | 16                     | 10              | 3       | < 10               |   |   |
| 42                                       | 20                     | 13              | 3       | 20                 |   |   |
| 43                                       | 22                     | 14              | 2       | < 10               |   |   |
| 44                                       | · 24                   | 11              | 4<br>२  | < 10<br>< 10       |   |   |
| 46                                       | 24                     | 12              | 4       | < 10               |   |   |
| 47                                       | 76                     | 22              | 6       | < 10               |   |   |
| 48                                       | 32                     | 10              | 3       | < 10               |   |   |
| 49                                       | 42                     | 10              | 5       | < 10               |   |   |
| Road #50                                 | 22                     | <u> </u>        | 3       | <u>&lt; 10</u>     | ······································  |   |
|  | 20<br>12               | 2.2<br>9.5      | 32      | < 10<br>< 10       |   |   |
|  | 16                     | 9.5             | 1       | < 10               |   |   |
| . 4                                      | 14                     | 10              | 2       | < 10               |   |   |
| T1 5                                     | 28                     | 9.0             | 3       | < 10               |   |   |
| T2 1                                     | 62                     | 27              | 2       | < 10               |   |   |
| 2  | 24                     | 14              | 4       | < 10               |   |   |
| 3  | 26                     | 13              | 3       | < 10               |   |   |
| T2 4                                     | 24                     | 4 0             | 3       | < 10               |   |   |
|  | 46                     | 11              | 2       | < 10               | M   |   |
| 3  | 30                     | 14              | 3       | < 10               |   |   |
| 4  | 22                     | 19              | 3       | < 10               |   |   |
| 5  | 22                     | 19              | 3       | < 10               |   |   |
| 6  | 16                     | 12              | 1       | < 10               |   |   |
| T3 7                                     | 20                     | 12              | 2       | < 10               |   |   |
| T4 1                                     | 24                     | 16<br>16        | 2       | < 10               |   |   |
|  | 20                     | ~17             | 2       | < 10<br>< 10       |   | -   |
| 4  | 18                     | 17              | 2       | < 10               |   |   |
| 5  | 16                     | 12              | 2       | < 10               |   |   |
| 6  | 14                     | 11              | 1       | < 10               |   |   |
| 7  | 24                     | 17              | 1       | < 10               |   |   |
| T4 8                                     | 24                     | 12              | 1       | < 10               |   |   |
| T5 1                                     | 17.                    | 12              | <u></u> | < 10               |   |   |
| 2  | 14<br>14               | 12              | 43      | < 10<br>< 10       |   |   |
| 2<br>4                                   | 16                     | 12              | ž       | < 10               |   |   |
| 5  | 46                     | 14              | 4       | < 10               |   |   |
| <b>T5</b> 6                              | 26                     | 30              | 3       | < 10               |   |   |
|  |                        |                 |         |                    |   |   |

<u>APPENDIX C</u>



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|                            |                 |   | <u>APPENDIX C</u> |                   |                                    | 212 BROOKSBANK AVE.<br>NORTH VANCOUVER, B.C.<br>CANADA V7J2C1 |  |  |
|----------------------------|-----------------|---|-------------------|-------------------|------------------------------------|---|--|--|
|                            | CHE             | MEX   | LA                | BS LTD.           | TELEPHONE:<br>AREA CODE:<br>TELEX: | 984-0221<br>604<br>04-352597                                  |  |  |
| · ANALYTICAL CHEMI         | ISTS - GI       | OCHEMISTS                                     | • RE              | GISTERED ASSAYERS |                                    |   |  |  |
| CE                         | RTIFICA         | TE OF A                                       | NALY              | SIS               | CERTIFICATE N                      | io. 52462   |  |  |
| <b>TO:</b> Nevin Sadl      | ier-Brown       | Goodbrand                                     | Ltd.,             |                   | - INVOICE NO.                      | 35251   |  |  |
| Vancouver,                 | B.C.            | ,   |                   |                   | RECEIVED                           | March 25/8  |  |  |
| V6B 2K4<br>ATTN: John Read | er              |   |                   |                   | ANALYSED                           | March 31/8  |  |  |
| SAMPLE NO. :               | PPM             | PPM   | PPM               | PPB               |                                    |   |  |  |
| T6 1                       | <u>PB</u><br>10 | 7.0   | 2                 | < 10              |                                    |   |  |  |
| 2                          | 12              | 7.0   | 3                 | < 10              |                                    |   |  |  |
| 3                          | 14<br>12        | 7.U<br>9.0                                    | 2                 | < 10<br>< 10      |                                    |   |  |  |
| 5                          | 18              | 9.0   | 2                 | < 10              |                                    |   |  |  |
| 6                          | 16              | 6.5   | 2                 | < 10<br>< 10      |                                    |   |  |  |
| 7.                         | 14<br>18        | 10<br>6.5                                     | 2                 | < 10              |                                    |   |  |  |
| 9                          | 34              | 15  | 1                 | < 10              |                                    |   |  |  |
| <u>T6 10</u>               | 16              | <u>    16                                </u> | 1                 | < <u>10</u>       | <u> </u>                           |   |  |  |
| <b>T7 U</b>                | 12              | 10  | 1                 | < 10              |                                    |   |  |  |
| 2                          | 18              | 10  | 2                 | < 10              |                                    |   |  |  |
| 3                          | 26<br>5 /       | 15  | 3                 | < 10              |                                    |   |  |  |
| 4                          | 28              | 10  | 1                 | < 10              |                                    |   |  |  |
| <b>T7</b> .6               | 36              | 15  | 7                 | < 10              |                                    |   |  |  |
|                            |                 |   |                   |                   |                                    |   |  |  |
|                            |                 |   |                   |                   | <u> </u>                           |   |  |  |
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|                            |                 |   |                   |                   | +- <b> </b>                        | - <u>0 n</u>  |  |  |

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#### APPENDIX D

#### Soil Geochemistry Analytic Method

- PPM Arsenic: A 1.0 gram sample is digested with a mixture of perchloric and nitric acid to strong fumes of perchloric acid. The digested solution is diluted to volume and mixed. An aliquot of the digested is acidified, reduced with Kl and mixed. A portion of the reduced solution is converted to arsine with NaBH4 and the arsenic content determined using flameless atomic absorption. Detection limit - 1 PPM
- PPM Tungsten: 0.50 gm sample is fused with potassium bisulfate and leached with hydrochloric acid. The reduced form of tungsten is complexed with toluene 3,4 dithiol and extracted into an organic phase. The resulting color is visually compared to similarly prepared standards. Detection limit - 2 PPM
- <u>PPM Lead:</u> A 1.0 gm portion of sample is digested in conc. perchloricnitric acid (HClO<sub>4</sub>-HNO<sub>3</sub>) for approx. 2 hrs. The digested sample is cooled and made up to 25 mls with distilled water. The solution is mixed and solids are allowed to settle. Lead is determined by atomic absorption techniques using background correction for lead and silver analysis.
- <u>PPB Gold:</u> 5 gm samples ashed @ 800°C for one hour, digested with aqua regia - twice to dryness - taken up in 25% HCL<sup>-</sup>, the gold then extracted as the bromide complex into MIBK and analyzed via A.A.

Detection limit - 10 PPB

Note: Samples are dried and run through 80 mesh prior to above.