86-024

September 26, 1986
Route 1 Box 43F1
Glenwood, Arkansas 71943

Ed Eisenman
Eisenman Enterprises
1612 1st Avenue
Greeley, Colorado 80631

Dear Ed:

Enclosed is the final report on the drilling project that was done in June and July on the Tea property in the Yukon Territory of Canada. It shows that there is a very large tonnage barite deposit with API specification gravity ore, some of which will be amenable to direct shipping. The thick high grade section at the lower end of the barite zone in hole 6 should be mineable without selective mining. This will be the place to start the project to get it off the ground. As this mining begins, the surface cover over the barite zone should be removed and a series of airtrac holes should be drilled at the surface to test the near surface quality, since this barite has not been systematically tested at the surface because of the cover.

Also enclosed is my bill for the report writing and expenses associated with the cross check sampling and the drafting of the maps. I believe that all the questions we discussed on the 23rd of July are answered in the report. If you need any amplification on any points or need additional information, please don't hesitate to call.

Sincerely,

A. Wallace Mitchell

Wallace Mitchell
Consulting Geologist

1986 REPORT OF

DRILLING ON THE TEA BARITE PROPERTY

BY A. WALLACE MITCHELL

AUGUST 1, 1986

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INTRODUCTION

This report is an amplification of the report made after an examination of the property in 1984 and that report should be considered as a part of this report. During the period between July 4, and July 12, 1986 diamond drilling of four N sized core holes were completed at the Tea Claims located in the MacMillan Pass area of the Yukon Territory of Canada by Caron Drilling of Whitehorse. The holes were numbered 5-8. The earlier holes, numbered 1-4, drilled by Jim Dodge in 1976 will be used as part of the evaluation of the property. The purpose of this drilling project was to determine the quality of the barite and as far as possible to determine the quantity. The drilling project was of limited scope, so it will be necessary in the future to further define the quality and quantity of the barite in more localized areas. This can be done during the mining operation by stripping and sampling the barite at the surface, and by sampling airtrac holes as the mining proceeds.

Drilling outlined several areas which will be ore zones or potential ore zones for future mining. The best hole was number 6 which encountered a zone of 110 feet of true thickness averaging 4.20 weighted specific gravity. Hole 5 penetrated 30.5 feet apparent thickness with a weighted gravity of 4.28 and 15 feet at 4.32. Hole number 7 encountered 29 feet apparent thickness with a weighted specific gravity of 4.30. Hole number 8 located 12 feet averaging 4.20. In each of these areas the high grade was enclosed in thick sequences of lower grade material and sometimes the high grade zones also contained intervals that were below grade, which will require careful selective mining in order to insure that quality of the product is maintained.

Analyses of the core were carried out at the site. The core from the first two holes was cut with a diamond saw and the last two were split with a core splitter. The saw did a better job, but it took so much time that it was decided to use the splitter to speed up the process. Once the samples were split, then the core was dried on a propane stove for 30 to 40 minutes. The samples were then crushed and pulverized. These pulverized samples were then analyzed with an air comparison pycnometer with cross checks by the Le Chatelier flask method (see appendix 1). Random samples were brought back to the US for analyses to check the accuracy of the work done in the field, and it was found that the values found in the field work generally agreed with the check samples (see appendix 2).

Data from the holes drilled in 1976 are being included in the ore reserve calculations. It was originally thought that the specific gravity results in the earlier drilling may have been too high because of washing away of the core. Also there are apparently no drill logs available of the earlier work, because the core was put in sacks at the drill site and sent for analysis without logging. The recent

drilling seems to agree with the earlier work and this data will all be used together.

Reserves of proven ore in the three beds drilled are calculated to be in excess of 900,000 tons at a weighted gravity of 4.22 with 91,000 tons of mineable direct ship barite averaging 4.27. This is an adequate reserve to supply even the most optimistic predictions of the arctic market for at least 10 years.

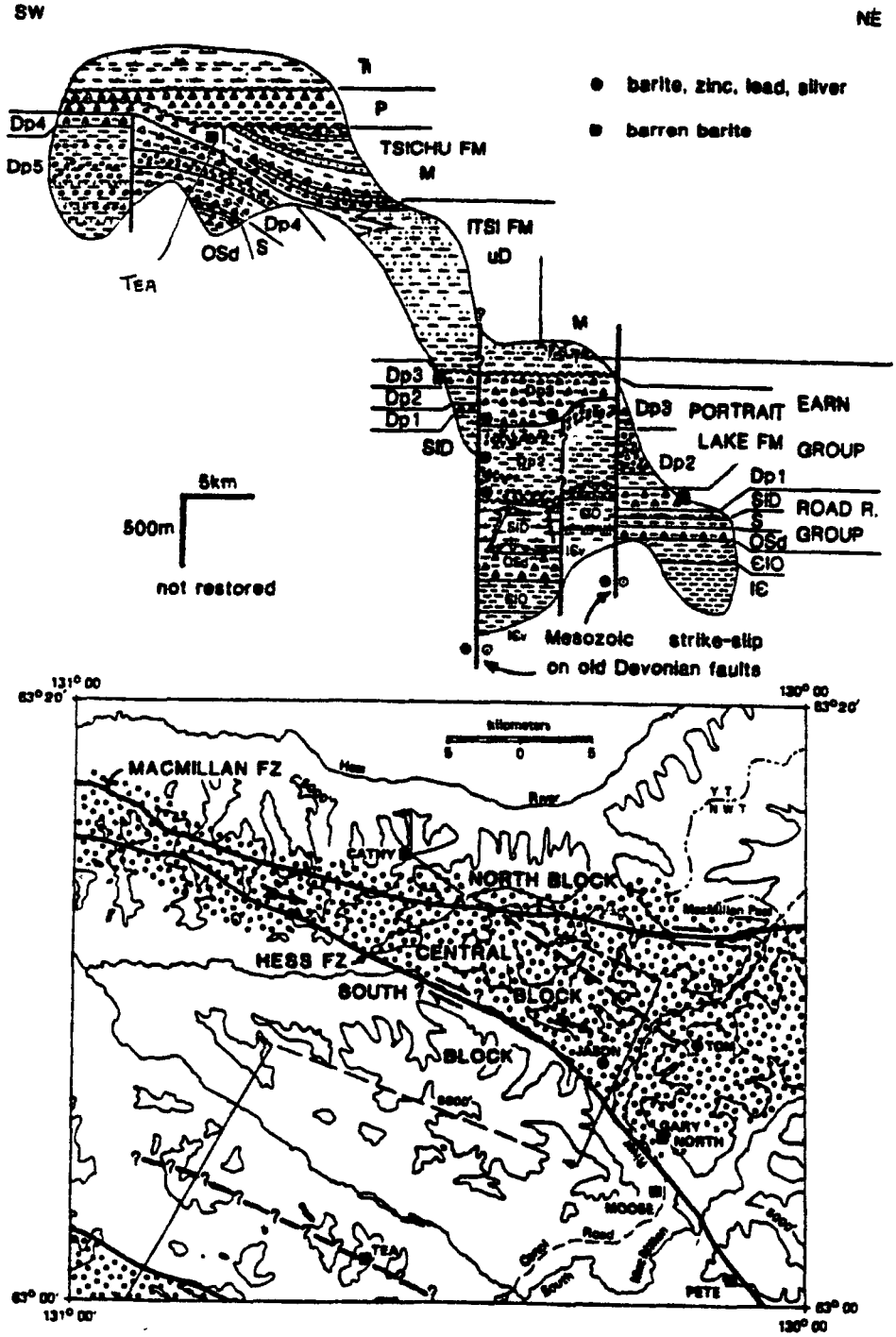
Reexamination of the geology indicated several new and interesting features that were not noticed before. The chert to the east and downhill from the mine appears to grade into black carbonaceous shale as a facies of the shale. It is also possible that the thick section of barite present on the south side of the mine area is laterally equivalent to shales to the north rather than the interpretation that Coolen gave in his paper of 1982. Evidence for faulting along the bedding planes in the exposed pit is not very convincing, although there is some limited faulting observed in the core which could be interpreted as the fault that Coolen drew on his map. Because facies changes are taking place along or near the axis of the fold in the shales, it is also likely that facies changes could be taking place in the barite as well. Nevertheless, both interpretations should be considered as mining takes place.

Radical thickness changes of the underlying formation to the north and south of the property are interpreted by Grant Abbott as being a possible growth fault along which the hydrothermal fluids migrated to create the barite deposit. Also recognized is a zone of white barite at the base of the hill near the scalehouse, which probably represents the feeder zone for the mineralization.

Beneficiation tests were conducted on two samples from Tea by Dawson Metallurgical Labs and it was determined that it will be difficult to separate the middling grade material in the range of 4.00 to 4.20 from the specification barite. Tests of 10 individual pieces of rock from the stockpile at the river near Ross River showed that most of them run over 4.20 and that there is a good chance that screening this material will produce a specification product. The only way to determine this for sure is to do a test with a screen. There are many small screens available in the territory which are used in mining gold placers which could be obtained for this purpose.

GEOLOGY

The regional geology is described in the report of 1984. The following figure shows in more detail the relationship of barite deposition to regional faults. Tea is the youngest of about 19 barite occurrences that have been identified within a 20 mile radius of Tea. Some of these are huge and at least one of them, the Cathy property has been drilled. It is owned by Baroid, is located about 20 miles north of Tea, and has a proven tonnage of about 400,000 tons. At the present there is no road access to the site.

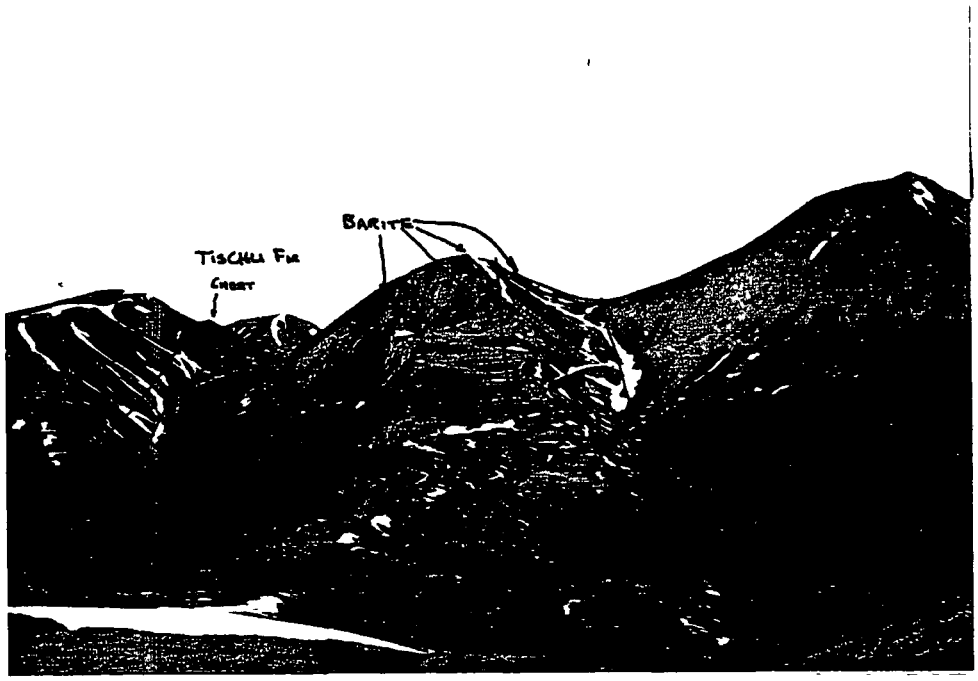


(modified from Abbott, et al, in press)

Stratigraphic section across the MacMillan Fold Belt (not restored). IC - Vampire Fm., ClO - Sekwi, Hess River and Rabbitkettle Fms., ODd - Duo Lakes Fm. Abrupt lateral changes in stratigraphy reflect syndepositional extentional and/or wrench faults. Mesozoic strike-slip of relatively small, but unknown magnitude along some faults complicates paleogeographic interpretations. The barite-zinc-lead deposits are spatially related to the faults.

Abbott has recently refined the stratigraphy in the area and puts Tea in the base of the Mississippian Tsichu Formation based on the conodants found in the limestones in and below the barite.

Mapping of the local geology refined the location of the contacts between barite and other rock types (see map in back pocket). The barite is fairly continuous along the strike of the north limb of the syncline for at least 600 feet. It is exposed as float northwest of the mine on the hillside just south of the saddle . The north limb of the syncline is crosscut by several small faults which offset the barite. West of the cliff exposures, the ore is not exposed either due to scree or pinching and swelling along strike. The barite is also probably broken up near the thrust fault to the north shown on the photograph below.



This view looking west shows the contrast in the stratigraphy on either side of the TEA BARITE deposit. The barite occurs in Early Mississippian near the base of the Tsichu Formation. Conodants indicate that Tsichu includes about 300 meters of quartzite bearing shale and chert on the north side but only 50 meters of chert on the south. Most of the Tsichu may have been removed beneath an unconformity west of the deposit. The coincidence of the change in level of erosion with the barite may indicate reactivation of faults related to the formation of the barite. (Based on work of Grant

Abbott displayed in DIAND in Whitehorse)

Facies change from chert to siliceous shale and black carbonaceous shale is evident east of the mine where chert forms bold outcrops, originally suggesting to the author that there was a fault. Close examination, however, showed that the chert grades laterally into shale. There also seems to be a lateral change in the limestone. To the south on the steep south slopes of the hill, the limestone is much thicker than on the north flank of the hill. It appears that the limestone grades laterally into barite, and fingers out into it. Thin calcareous zones are present throughout the section that has been drilled suggesting such a relationship. (A sample of one of the calcareous zones was analyzed by X-Ray difraction and determined to be a mixture of barite and calcite. It is not barytocalcite or witherite. (Don M. Hudson personal communication see appendix 3)) . These features all fit nicely into the picture that Abbott has suggested with a regional growth fault traversing the property, which would cause lateral thickness changes and gradations of one rock type into another(see regional cross section). Coolen's paper (1982) explained the increased thickness of barite on the south limb of the syncline as being caused by a fault which has doubled the stratigraphic thickness. The evidence for the fault in the present pit where he has it mapped is not convincing. The crushed zone exposed on the road below the mine at survey point 14 is more acceptable as a fault zone although the offset does not appear to be large. Nevertheless, an alternate explanation for the thickness change is the presence of a lateral facies change from limestone, shale and chert to barite. This interpretation fits well with the other observations of facies changes in the area.

Abundant syn-sedimentary faulting and slumping is seen in the core (see appendix 4 and the photos of core). Rip up clasts and other such sedimentary features expected to be seen with a growth fault are present. Lydon suggested a possible feeder zone for the mineralization in the white brecciated barite located at the bottom of the hill near the scale house. From an academic point of view, this area would be extremely interesting for further study.

Surface samples of rock were tested for specific gravity and the values are shown on the accompanying map in the back pocket. These samples showed the very erratic values present in the barite of this area. Values range from 3.37 to 4.43 and average 4.17 over the 31 samples taken. More than half of the values exceed 4.20. This again shows that there is a considerable amount of subgrade barite, but there is also a considerable amount of the higher grade barite as well, and that all together the ore is near the API specification.

STRATIGRAPHY

The regional stratigraphy is detailed below:

Cretaceous

Kg Resistant, blocky, grey weathering porphyritic

to equigranular biotite quartz monzonite and biotite granite.

Triassic

TRs Recessive, dull brown weathering thin bedded to thinly laminated calcareaous sandstone, and shale.

Permian and (?) Pennsylvanian

CPpt Resistant, dark orange brown weathering interbedded greenish grey cherty shale and recessive green shale.

Carboniferous

Cl Grey weathering thick bedded to massive bioclastic limestone: minor quartz arenite and shale. Occurs within unit Csp.

Cq Dark grey weathering massive to thick bedded quartz arenite, thin to medium bedded sandstone and quartz arenite with shale interbeds. Occurs within unit Csp.

Csp Recessive, brown and dark blue weathering silty shale, shale and siliceous shale with some beds of sandstone and quartz arenite.

Mississippian

Upper Earn Group

Msp Resistant, brown weathering, thick-bedded ripple crosslaminated sandstone, siltstone and shale overlain by recessive blue weathering siliceous shale; in turn overlain by resistant dark brown weathering thin-bedded, dark grey shale and silty shale.

Lower Earn Group

muDpt Talus forming, silver blue weathering, platy siliceous shale, minor chert and rare thin 2-5 cm thick beds of coarse-grained limestone and platy grey weathering barite in beds less than 1 m thick.

(?) Middle and Upper Devonian

muDcg Resistant, grey weathering resistant chert pebble conglomerate.

muDps Brown weathering thinly laminated grey shale and siltstone with less chert, quartz sandstone and grit.

Lower and Middle Devonian

emDpt Black to dark blue weathering thin-bedded chert, cherty argillite and siliceous shale. Light grey clastic limestone in beds 1 m thick or less near base and intermittent barite up to 30 m thick in 1 or more horizons.

Underlying these units is the Road River Group and older rocks.

Abbott (1986) has named several new formations that are not formally accepted at this time (see appendix 5):

"Near MacMillan Pass, the Earn Group overlies shale, chert, and silty limestone of the Ordovician to Early Devonian Road River Group, (which) is overlain by Mississippian quartz arenite and shale of the Tsichu

Formation, and includes the Portrait Lake Formation and the Itsi Formation. The Portrait Lake Formation ranges from latest Early Devonian to latest(?) Devonian and includes five members. Members Dp1, Dp3, and Dp4 are blue-weather(ing) siliceous shale and chert with some chert conglomerate. Members Dp2 and Dp5 are brown weathering turbidite assemblages containing chert pebble conglomerate, grit, sandstone, and shale that form two linear belts separated by time equivalent siliceous shale."

DRILLING

Drilling on the Tea claims was done during the period of July 4 thru July 12, 1986. Four N sized diamond drill holes were drilled; one hole on Tea 79 and three holes on the Tea 80 claim. The holes were sited so as to penetrate the barite as nearly perpendicular to the bedding as possible. The cost of drilling was greater for angles of less than 50 degrees so none of the holes was intentionally set up to be less than 50. Logs of these holes along with the analyses of specific gravities are in appendix 4. The locations of the holes are indicated on the maps in the back pocket, along with cross sections of the present drilling and the 1976 drilling done by Jim Dodge. The methods of analyses are described in appendix 1 at the back of this report.

On Tea 79, one diamond drill hole of N size numbered 8 was drilled. The hole is located on the accompanying map which includes the location of the #1 and #2 posts of Tea 79 along with their relationship to local topography. The core is stored at the core library of the Department of Indian Affairs and Northern Development in Whitehorse. The contact person at the core library at DIAND is Mike Cosak (403-667-3130). The core has been properly identified, filed in core boxes, and the drill logs are filed with DIAND.

Hole 8 located on the south flank of the ridge and about 800 feet southwest of drillhole 5 was drilled at 48 degrees striking N5W for 200 feet. It penetrated 3 zones of barite from 32-97 feet with the best zone from 85-97 feet with a weighted specific gravity of 4.20.

On Tea 80, three diamond drill holes of N size numbered 5, 6, and 7 were drilled. The holes are located on the accompanying map which includes the location of the #1 and #2 posts of Tea 80 along with their relationship to local topography.

Hole 5, located just above and to the west of the present mining area was drilled on an angle of 52 degrees striking N10E for 202 feet. It penetrated several areas of low grade barite and higher grade zones at 62-77, and 143.5-176. Specific gravities in the upper zone had a weighted average of 4.32. The lower zone had a weighted average of 4.28.

Hole 6 located south of #5 about 62 feet was drilled at 54 degrees south for 362 feet. It penetrated numerous low grade zones and higher grade zones at 27.5-33,

48-52, 63-78, 131-142, 195-209, 218-236, 267-332, and 335-345.5. Weighted specific gravities are 27.5-33= 4.26, 48-52= 4.32, 63-78= 4.30, 131-142= 4.31, 195-209= 4.25, 218-236= 4.24, 267-332= 4.27, 335-345.5= 4.22.

Hole 7, located in the present mine area and on the axis of the fold was vertical. It encountered high grade at 36.5-42, 72-78, and 84-113. Weighted specific gravities were 36.5-42= 4.26, 72-78= 4.25, and 84-113= 4.30.

Dozer work on the drill roads leading to the drill sites for holes 5 and 6 exposed barite for 150 feet south of 6. Approximately 1200 yards of overburden were removed from the area and access to the future stripping operations was completed. The road and drill sites also exposed the axis of the fold farther up the hill than had been exposed previously.

The best zone penetrated is the 65 foot section in hole 6 from 267-332. This zone is just south of the highest grade surface samples taken to the south of pit #1. It appears that this will be an easily mined width which will require little selective mining and yet will maintain grade on a direct ship basis. It is wide enough to justify the stripping necessary.
If the barite from 188.5-267 is included in the weighted average, the overall weighted specific gravity is 4.195 over a true width of 110 feet. This is the width which will be used for reserve calculations.

RESERVES

Reserves of barite-bearing material on the property are truly enormous. The proven reserves and those reserves which will make a saleable product on the other hand are more restricted. The area of greatest interest is in the area to the south of pit #1, where hole 6 encountered 110 feet of true thickness of barite with a weighted average of 4.20 (see sections in the back pocket). Reserve calculations are found in appendix 6. Proven ore reserves are defined on the basis a 100 foot influence area from the drill hole vertically and horizontally. Each specific gravity value is weighted according to the length in the hole so that the gravities reported in the reserve calculations are weighted averages. Total proven tons of barite are 939,074 tons at a weighted specific gravity of 4.216. Indicated tons are 374,275 at a weighted gravity of 4.246. These indicated tons are up to an additional 100 feet from the drill hole and therefore are less assured. Inferred tons which are based on longer distances or are based on geologic evidence, amount to 11,375 tons at 4.305 gravity. The total tonnage is 1,324,724 at 4.225. It must be realized that these tons are not necessarily mineable because of the amount of stripping to be removed in order to remove the barite.

Bed 1 which is exposed just north of hole 5 and just south of hole 6 and in the nose of the syncline west of hole 7 contains a total of 141,887 tons at a weighted average of 4.203. This consists of 73,930 tons at 4.17 proven in hole 5, 25,207 tons at 4.22 proven in hole 2, and 42,750 tons

at 4.25 proven in hole 7.

Bed 2, which is exposed in the lower portions of the cliffs, was penetrated in holes 3,4,5,and 6. It contains a total of 467,837 tons at a weighted average of 4.267. In holes 3 and 4, 77,187 tons were proven with a specific gravity of 4.226. Hole 5 proved 120,000 tons at 4.28 and indicated 96,750 tons at 4.28. Hole 6 proved 50,000 tons at 4.31, indicated 25,000 tons at 4.31 and inferred 8750 tons at 4.31. An additional 87,525 tons of 4.288 gravity barite is indicated between sections 1 and 3 with 2625 tons of 4.31 inferred at the same location.

Bed 3, exposed south of the present pits was penetrated in hole 6. It contains a total of 715,000 tons at 4.195 specific gravity. This consists of 550,000 proven tons and 165,000 indicated tons.

Direct ship ore is available at the surface projection of the lower part of the high grade intersection in hole 6. Unfortunately this material is in the indicated category at the surface. Mining the 49 foot true thickness at the bottom of the high grade with a weighted average of 4.27, down dip 100 feet and into the hill 150 feet, would yield 91,875 tons of direct ship ore. The lowest 29 feet of this section has a weighted average of 4.35 which would yield 54,375 tons if mined using the same parameters as above. This is the ore which should be developed in an early direct shipping operation. It should first be stripped off so that only barite is exposed and so that no waste will fall into the mining area. Then air trac holes on 30 foot centers should be drilled and sampled to block out the area just before mining begins. These holes ought to be vertical and about 100 feet deep if possible.

BENEFICIATION

Beneficiation tests on two samples of barite from the Tea property were conducted in Salt Lake City by Dawson Metallurgical Laboratories on the 29th of May. The samples were from the visit of 1984 and consisted of one composited sample of the channel cut from pit #1 and a composite of the stockpile at the plant building near Ross River. Three individual rocks from the stockpile were randomly selected and the specific gravities were determined. They were found to be 4.30, 4.10, and 4.39. The average is 4.26. Because of the small number of samples tested, this is not a statistically valid test, but at least gives an indication of the grade of ore in the pile. On July 12, ten samples of the stockpile at the river near Ross River were collected. These were individual rocks picked at random in the dark. The specific gravities were: 4.43, 4.21, 4.13, 4.27, 4.36, 4.30, 4.35, 4.07, 4.23, and 4.20, which averages 4.26. With two stockpile averages of 4.26 on rock values from the two stockpiles, at least we should have some confidence that there is a considerable amount of above specification material in the piles. Again these are not statistically valid tests.

Dawson did hand jig tests on the channel and

stockpile samples that I took to him and reported that the float products contained relatively high specific gravities and the sink products contained marginal gravities. He concluded that it could be difficult to consistently obtain 4.20+ products with a jig, based on the ore he tested (see appendix 7). It was intended that further hand jig tests would be conducted on the site, but due to the heavy demands of the drilling project and the analyses, this was not accomplished. A future project might include this as one of the things to be done during an initial direct ship operation. Jigging is still not out of the question.

Sites for a jig plant were inspected and it is concluded that it would be most convenient to site the plant near the mine, should it be determined that such a plant would be successful in separating the ore from the waste. The best site is on the present pad prepared for stockpiles during the past mining. Jigging would be a partial season operation. Water could be captured from the stream running just north of the barite outcrop, by putting a small dam across the stream. This stream was running in August of 1984 during the evaluation project. All that would be required would be makeup water anyway, which for an operation of the size contemplated here, would be very small. Several small ponds exist within a few hundred feet of the proposed site and they could be utilized if the need arose.

MISCELLANEOUS

During a visit to Blake Baxter, the Regional Mining Recorder, (403-667-3130) it was learned that the leasing of mining claims removes them from the category of public land which anyone can enter onto and protects the miner's right to restrict access to the property. Until a lease is issued, the miner cannot put up a gate or prevent anyone from entering the property. The rental payments are minimal and a lease should not be too difficult to get. The lease also puts the liability on anyone who enters the property because it can be posted. Up until that time, if a person is hurt while entering onto the property, the miner is liable. In actual practice some have put up gates before the land is leased, and nothing is said. Technically this is not legal, but is the practical thing to do if there is equipment on the property. That is probably the most important time to have restricted access to the property. From Baxter's explanation, leasing at the moment is not necessary until a definite decision to proceed with the development of the property is made.

The Form "C"s for the Tea Claims were prepared on July 25,1986 and sent to Roland Ronaghan in Mayo where he received them on the 8th of August. The check in payment for the filing and the documents on the cost of the project were received from Greeley about 4 days previously. He confirmed by telephone that the documents sent were adequate to satisfy the law. The forms are included in appendix 8. In the process of filing the claims, only 31 were renewed through 1991. 44 claims are valid through August 2,1987. The claims

that are dropped are 24-34, 95, and 96. These are located on the south and southwest portion of the block and are of no value to the project at this point. Most of the southern part of the block could also be dropped, but since there was so much excess work performed, and no extra effort was required to maintain the 31, it was decided to file them. In 1991 this could be re-evaluated to see if it might not be adviseable to drop more of the block.

In addition to the drilling, several property examinations were made during the trip. The access to the Falcon claims was researched and it was found that the road is in very poor condition and it is not planned for improvement on the Northwest Territories side anytime in the immediate future. Therefore these claims should be allowed to lapse. The Moose claims were renewed by payment in lieu of the performance of work, and the Tea claims were renewed for an additional 4 years due to the diamond drilling.

Included in the appendices is a daily log of the trip which describes the events of each day (appendix 9). Reports on the visits to the Fireside Barite Porperty near Fireside, B.C. and the examination of the grinding plant at Watson Lake are found in appendices 10 and 11. A report on the visit to the Midway project, which could be a potential competitor to the Tea Barite, is found in appendix 12. On the trip up to Whitehorse, a breif visit was made to Halliburton's offices in Calgary. The material gleaned from their files that relate to Tea are found in appendix 13.

RECOMMENDATIONS

The drilling project has proven a very large reserve of barite which are within the specifications of the API. In order to develop the orebody at this point the following should be done:

1. Strip the zone indicated on the map in the back pocket. This zone is located behind and to the south of the pit and represents the high grade zone encountered in hole 6.

2. Drill this stripped area on 30 foot centers with an airtrac drill. Each hole should be vertical and should be sampled.

3. Upon the decision to mine the property, apply for a lease of the immediate mine and possible mill area. This will include claims 77-80.

4. The first mining will probably be direct ship ore. During this mining phase, a series of hand jig tests should be done to get a better idea of the jiggability of the ore in various zones in the orebody.

5. Run a small scale screening test on the stockpiles at Ross River using a small screen.

6. Monitor the market and when signs of movement begin, prepare to get the project on line.

TEA AT BEGINNING OF PROJECT BEFORE NEW ROADS WERE BUILT TO SITE #8 AFTER SITE 5,6 WAS PREPARED JULY 1, 1986

LOOKING WEST AT TEA JULY 3, 1986

TEA AT SETUP JULY 4, 1986 TEA BARITE PROP YUKON, CANADA

#6 AT TEA JULY 6, 1986 LOOKING WEST

EA BARITE

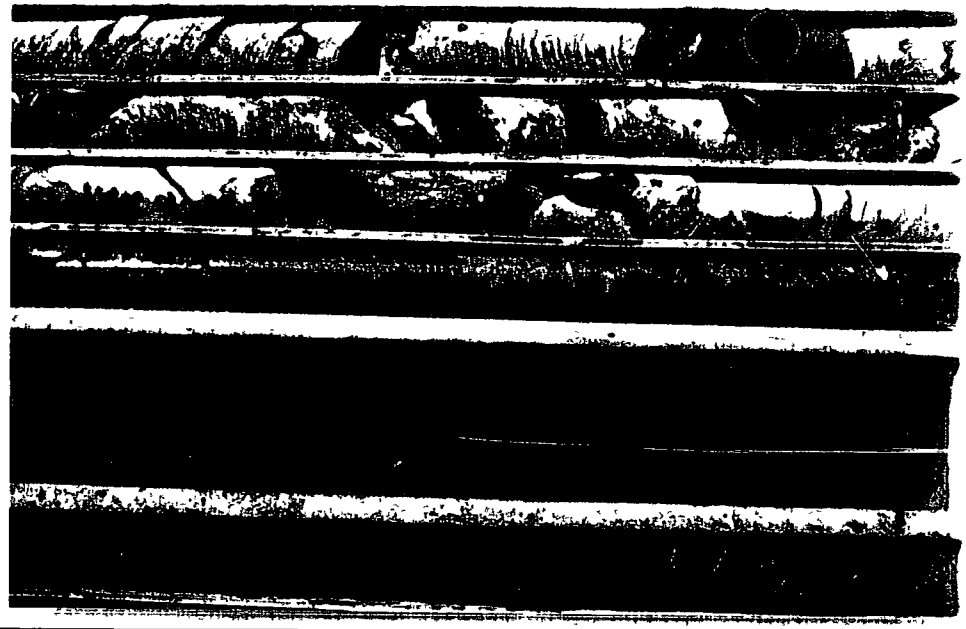
SYNSED FAULTING IN CENTRAL [illegible]

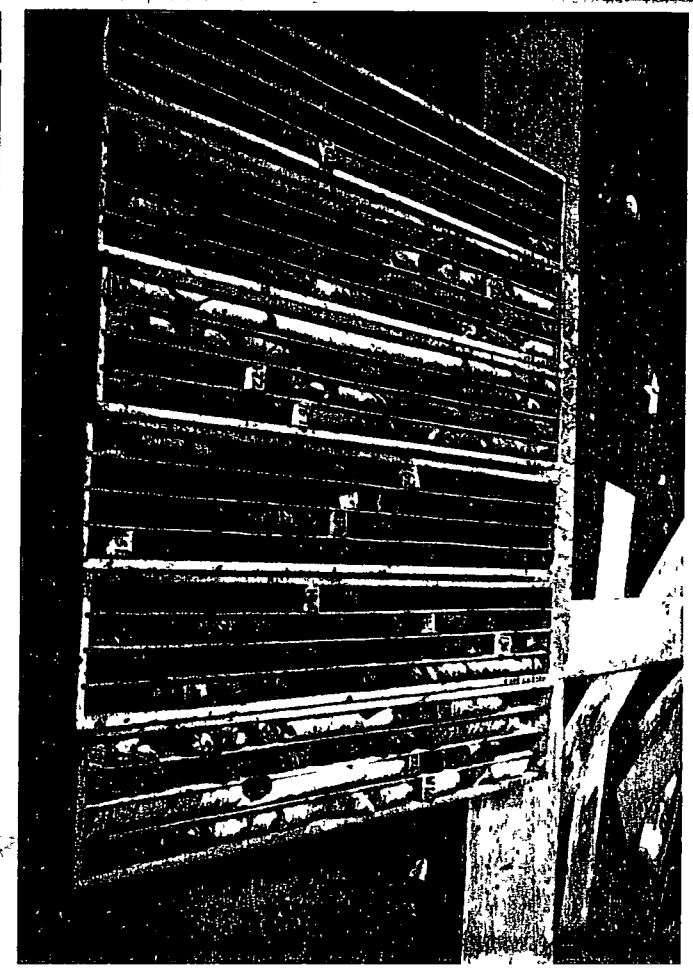
JULY 9, 1986

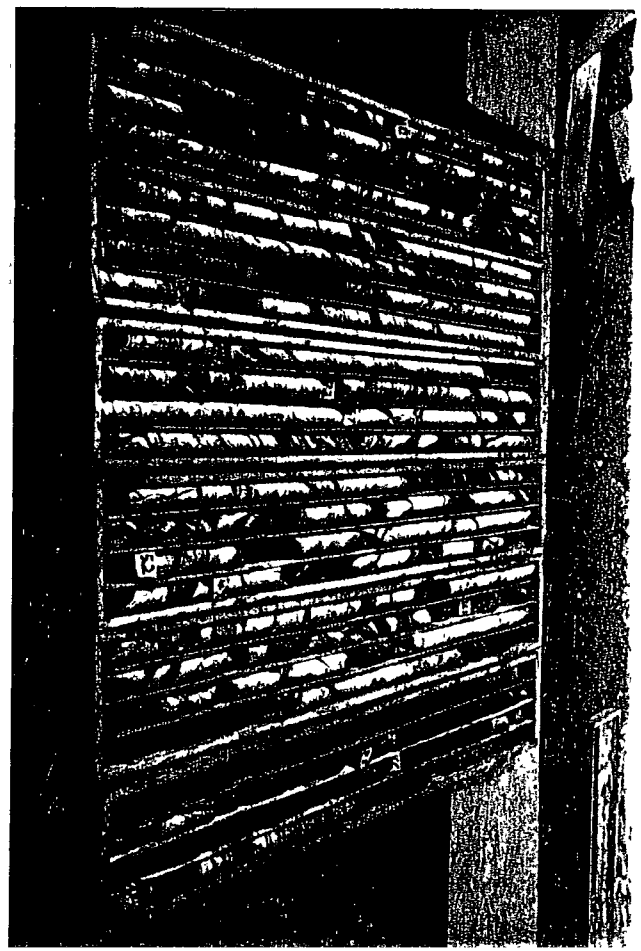
TEA BARITE YUKON CANADA

SLE 6 BOXES 19-21 322 - 362

#6 SITE TEA CLAIMS YUKON JULY 6, 1986







A BARITE [illegible], CANADA

IN CENTER OF PHOTO SED SLUMPING
W/ RIP UP CLASTS IN BARITE
TOP IS TOWARD BOARDS

TEA BARITE PROP JULY 9, 1986

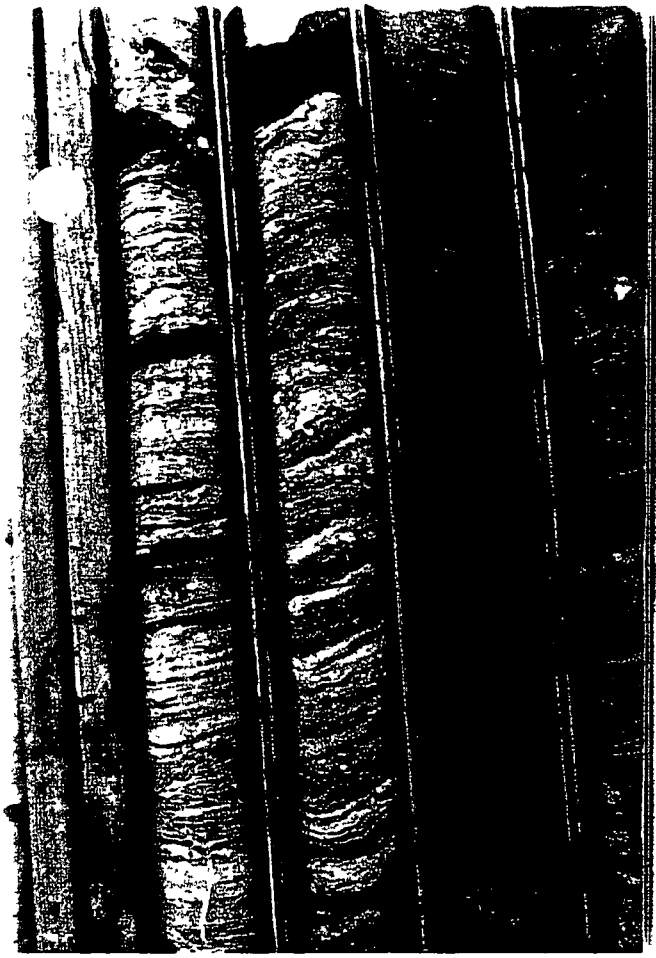
OLE 7 BOXES 7-12 114-207

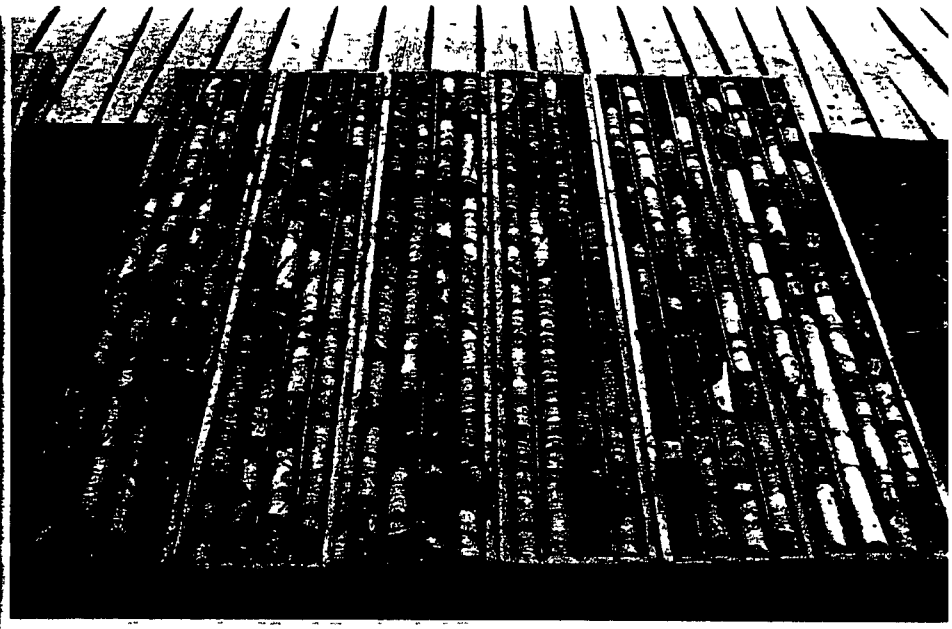
TEA BARITE YUKON CANADA JULY 9, 1986

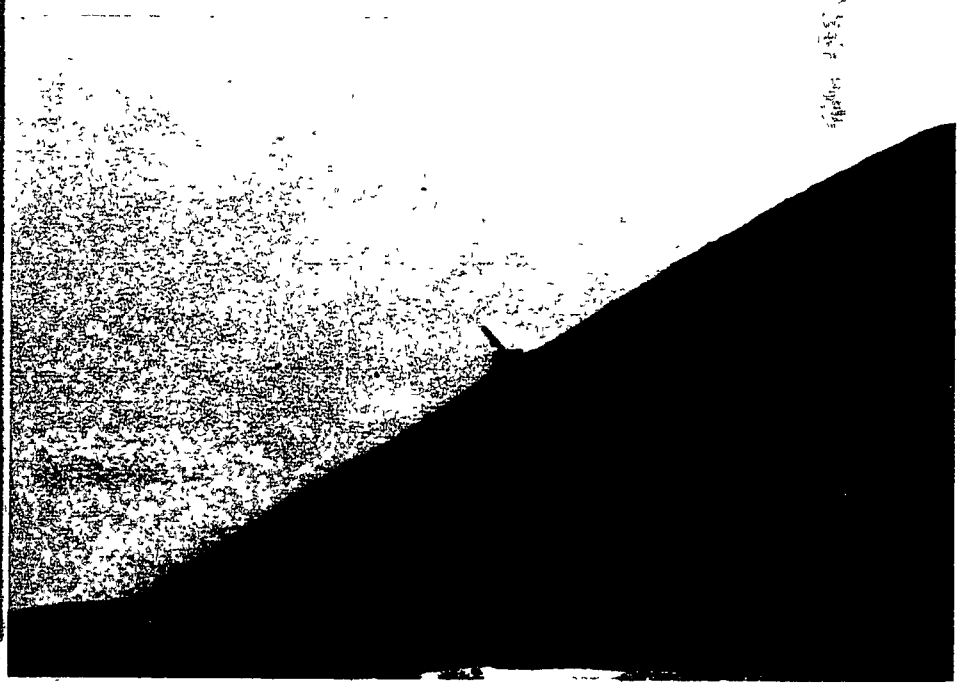
HOLE 7 BOX 12 at 202'
SCATTERED NODULES IN ARGILLITE.

E 7 BOX 3 55'
SYNSED FAULTING IN ARGILLACEOUS UNIT

JULY 9, 1986







SLUMPS AND SOFT SED DEFORMA

HOLE 8 BOXES 7-11 115½ - 200

HOLE 8 BOX 4
76' MARKER IS TOP OF SECTION
CRENULATIONS DUE TO FOLDING

EA BARITE DRILLHOLE 8 JULY 10, 1986
-OOKING SW

YUKON JULY, 1986

SAMPLE PREPARATION ARRANGEMENT AT ABERFORD CAMP
JULY 8, 1986

OKING SOUTH AT TE LOOKING SOUTH AT TEA JULY 4, 1986
EFT

JIM BARTLETT, TOM GARAGAN
JULY 13, 1986 TEA BARITE PROJECT YUKON, CANADA

RILLHOLE 8 LOOKING NE JULY 8, 1986

TEA BARITE YUKON CANADA

3 DRILLSITE JULY 8, 1986

EA BARITE YUKON CANADA

APPENDIX 1

ANALYSIS PROCEDURES

Most of the analyses for specific gravity done on the drill core of the Tea Claims were done with a Beckman Model 930 air comparison pycnometer. This machine uses two cylinders and two pistons which are connected by a valve system and a gage which is used to keep pressure equal in both cylinders as they are moved to the extreme end. Inside one of the cylinders is placed the sample of known weight and the difference between the volumes of the two cylinders is determined. This is the volume of the sample. Usually the sample is weighed out at 80 grams. The weight is divided by the volume to determine the specific gravity. Several times during any operating session a zero reading was taken by inserting the empty sample cup in the machine to determine if a correction factor should be applied to the readings. Most often the zero reading came out at 0.15 cc, which was subtracted from the total reading to determine the sample volume. Also at least once a day the steel balls that are of known volume were checked to see if the machine could duplicate the known values. Many of the samples were run more than once to determine the reproducibility of the results. When results did not reproduce, then the sample was rerun until a reproducible result was obtained.

The operating procedures were as follows:

1. Rotate both reference and measuring handwheels counterclockwise to rest against stops. Open coupling valve. Remove sample cup.

2. Turn measuring handwheel clockwise until starting number is set on the counter.

3. Place sample in the cup. Insert cup in compartment. Lock sample cup in place by pressing handle down firmly.

4. Wait 15 seconds. Then close coupling valve.

5. Turn both handwheels clockwise simultaneously or alternately until reference handwheel rests against stop. Keep pointer on scale during this process.

6. Wait ten seconds. Bring pointer to null with measuring handwheel.

7. Open coupling valve. If pointer does not move, read counter.

8. Before removing sample cup, return both pistons to starting positions by counterclockwise rotation of handwheels.

LE CHATELIER FLASK METHOD

The Le Chatlier flask method uses a special bottle that measures the volume of displacement of liquid by a weighed sample. The same calculation that is used on the pycnometer is then employed to determine the specific gravity of the sample.

The procedure is as follows:

1. Fill a clean Le Chatlier flask to near the zero mark with an organic liquid of low volatility such as kerosene.

2. Place the flask in a constant temperature bath so that the meniscus of the organic liquid in the neck of the flask is below the liquid level of the bath. Control the temperature of the bath within 0.1 degree F at approximately 20 degrees F above room temperature.

3. Allow 1 hour of immersion for the flask to reach bath temperature. Read the initial volume with the flask immersed in the bath, or within 5 seconds after removing the flask from the constant temperature bath.

4. To the sample flask add approximately 80 grams of barite (weighed to + or - .05 grams) which has been oven-dried for at least 2 hours at 200 degrees F.

5. Tap, roll, or shake until as much entrained air as possible is removed from the barite sample.

6. Replace the flask in the bath again for at least 1 hour.

7. Remove any remaining air from the barite by again shaking, tapping, or rolling the sample flask.

8. Immerse the flask in the bath again for at least 1 hour.

9. Read the final volume in the same manner as the initial volume.

It should be emphasized that to obtain reproducible results, the barite sample must be accurately weighed and volume readings must be carefully made to the nearest 0.05 cc at thermal equilibrium in a constant temperature bath controlled within + or - 0.1 degree F. Close attention must be given to the complete transfer of all weighed barite to the flask and to maximum elimination of entrained air.

The difficulty encountered in using the Le Chatelier flask method was that the temperature controlled water bath was not available at the site. The values of readings nevertheless should be fairly close to the actual values. Typically pycnometer values are about .02 higher than corresponding values determined with the flasks. In my work the pycnometer, showed an average of .035 higher. Other problems that can affect the results are (1) the coarseness

of the grind -- it should be about 200 mesh (2) the dryness of the sample and (3) the reading of the meniscus. The grind obtained with the pulverizer was coarser than desireable and could contribute to errors in specific gravity readings. The pulverizer did not seem to have the power to grind the samples as fine as required, unless they were run through several times. Another factor to be considered is the homogenization of the samples. They should be carefully mixed before the analysis is done. This is because the grinding process tends to segregate the sample according to the difficulty in grinding.

APPENDIX 2

VALIDATION SAMPLES SENT TO UNIVERSAL LABS

A group of 26 samples randomly selected from the samples analyzed in the field were sent to Universal Laboratories in Elko, Nevada to check the accuracy of the work done in the field. These values are presented in the table below. The average dfference that should be expected from pycnometer to Le Chatelier analyses is generally in the range of +.02 higher for the pycnometer than the flasks. If the differences in the values are averaged, the average difference is +.035 higher for this set. The most likely cause of the larger value is the size of the grind of the samples. The pulverizer used on the site tended to stall when the disks were set close enough to produce the grind necessary, so many of the samples were coarser than they should have been. The optimum size is -200 mesh.

HOLE	SAMPLE #	UNIVERSAL	MITCHELL	DIFFERENCE
5	149-152	4.24	4.23	-.01
	156-158	4.32	4.30	-.02
	158-160	4.26	4.33	+.05
	164-166	4.31	4.34	+.03
	166-168	4.23	4.26	+.03
	168-170	4.24	4.27	+.03
	170-172	4.30	4.32	+.02
	172-174	4.23	4.29	+.06
	176-178	3.66	3.69	+.03
6	59-61	4.07	4.11	+.04
	63-65	4.28	4.32	+.04
	65-67	4.15	4.15	0
	67-69	4.35	4.39	+.04
	258-261	4.15	4.25	+.10
	269.5-272	4.12	4.17	+.05
	294-297	4.10	4.10	0
	314-316	4.44	4.36	-.08
	324-326	4.36	4.41	+.05
	337-339	4.21	4.26	+.05
7	54-57	3.99	4.02	+.03
	69-72	4.10	4.17	+.07
	90-93	4.24	4.32	+.08
	99-102	4.30	4.31	+.01
8	76-79	4.00	4.04	+.04
	141-148	3.92	4.06	+.14
	153-156	4.03	4.07	+.04

Universal Laboratory

1070 SILVER STREET, ELKO, NEVADA 89801 • TELEPHONE (702) 738-3614

REPORT OF ANALYSIS

Project: Wallace Mitchell
02095

Date Received 8/19/86

Date Completed 9/01/86

Sample - Number	*Specific Gravity						
# 5 149 - 152	4.24						
156 - 158	4.32						
158 - 160	4.26						
164 - 166	4.31						
166 - 168	4.23						
168 - 170	4.24						
170 - 172	4.30						
172 - 174	4.23						
# 5 176 - 178	3.66						
# 6 59 - 61	4.07						
63 - 65	4.28						
65 - 67	4.15						
67 - 69	4.35						
258 - 261	4.15						
269.5 - 272	4.12						
294 - 297	4.10						
314 - 316	4.44						
324 - 326	4.36						
# 6 337 - 339	4.21						
# 7 54 - 57	3.99						
69 - 72	4.10						
90 - 93	4.24						
# 7 99 - 102	4.30						
# 8 76 - 79	4.00						

*(Barite by API & Le Chatelier Flask)

S R Lindauer
Chemist & Assayer

Universal Laboratory

1070 SILVER STREET, ELKO, NEVADA 89801 • TELEPHONE (702) 738-3614

REPORT OF ANALYSIS

Project: Wallace Mitchell
02095

Date Received 8/19/86

Date Completed 9/01/86

Sample - Number	* Specific Gravity						
# 8 141 - 148	3.92						
# 8 153 - 156	4.03						

S R Lindauer
Chemist & Assayer

Consulting Geologist
745 Moran Street #3
Reno, Nevada 89502

Wallace Mitchell
Consulting Geologist
Route 1 Box 43F1
Glenwood, Arkansas 71943

September 23, 1986

Dear Wallace,

Enclosed are the x-ray diffraction patterns of the samples you sent me.

Sample CH-11 consists of highly ordered kaolinite with a small amount of dickite with some quartz. Kaolinite and dickite are similar stucturally so there are numerous peaks that are essentially the same. This is an unusually crystaline material and certainly looked like muscovite. No other minerals are identifiable in the sample. The coating looks to be iron oxide but may be too small amount to show up in the x-ray pattern or the material is amorphous. I looked for any gold sulfate compounds in the x-ray diffraction manuals and no species with any additional anions or cations is listed. Apparently there is no such thing as a gold sulfate other than perhaps as a minor substitution in another sulfate mineral.

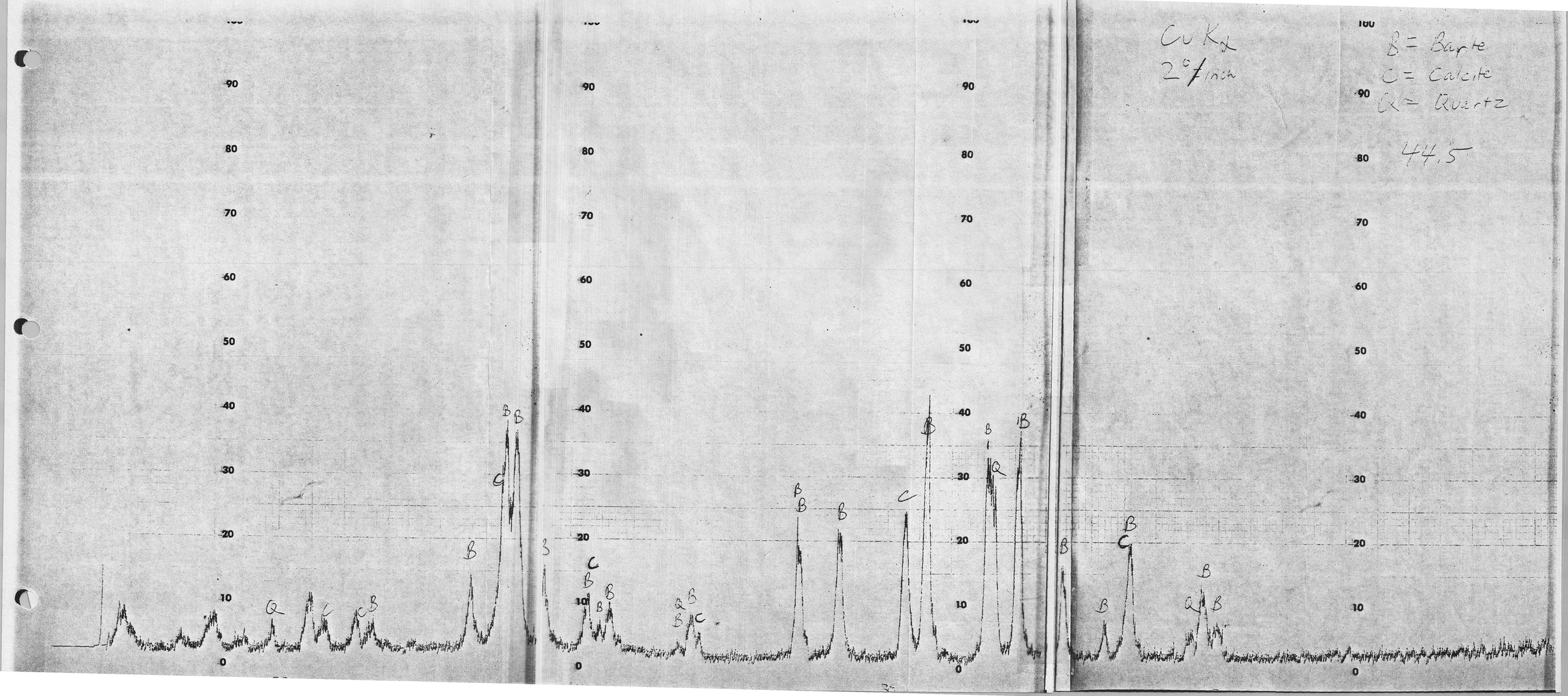
Sample 44.5 contains barite, calcite, and minor quartz. I checked for barytocalcite an none appers in the pattern. Again, if it is less than 3 to 5% of the material, it would not generally be detectable.

Thank you for the work. If you need anymore x-ray work done, please let me know. If you need the samples back please inform me.

Sincerely,

Donald M. Hudson

Donald M. Hudson


CuKα
2°/inch
B = Barite
C = Calcite
Q = Quartz
44,5

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: 52 N 10 E

Property:

Co-ordinates: North 10,220.31 East 8869.42

Elevation: 1463.31

Date: July 4, 1986 - July 6, 1986

Drilled By: Caron Diamond Drilling Jim Bartlett Lech Wogocowski

Logged By: A. W. Mitchell

Total Depth: 202

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES $BaSO_4$	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
0	8	0					Black sticky broken shale. (rockbitted)
8	12	16%					Black broken siliceous shale 1 one inch layer ls
12	14	55%					Black fractured carbonaceous shale.
14	16	85%					Black fractured carbonaceous shale w/ occassional 1/8" barite nodule.
16	20	85%					Black siliceous shale becoming more carbonaceous in lower foot w/ Ba nodules up to ¼" across. Some show concentric layering. Bedding crosses core @ 40° from perpendicular.
20	23	95%					Dittohighly broken. Nodules increase in last 1 foot to 30-40% of rock.
23	27	85%					Black shale, highly carbonaceous in part
27	28	20%					Rare nodules
28	30½	35%					Black shale slightly more siliceous. One layer of coalescing nodules in lower part.
30½	32	0					Tricone set casing
32	39	65%					Bedding 25°from perpendicular. Coalescing nodules making 40 - 70% of rock w/ carbonaceous or siliceous material remainder Vuggy Fe stnd zone @ 36. Nodules generally becoming smaller &

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES $BaSO_4$	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
							grading in to massive barite toward bottom.
							2" layer ls at 38½. Fractured at bottom w/
							possible gypsum (?) on fracture
39	42	95%					1" layer ls at top - fractured barite - finely
							laminated 2" shale seam @ 40.
42	46½	95%					6" layer ls W/ slumped barite at 42 finely laminated.
							Bedding near perpendicular to hole. Fractured
							zone at 42½ containing white chalcedony &
							Fe oxides. 5" layer ls at 45. Barite 45½-46½
							laminated & coalescing nodules. Fractured at 45½
							Bedding 25° from perp to hole. Finely laminated
							barite.
46½	51½	98%					Finely laminated barite with fracture parallel to
			49-51.5	4.17			hole. Slump features @ 48'. Fracture w/
							barite xls at 48½. Bedding 10° from perp. to
							hole. Several hard siliceous layers up to ½" thick.
51½	56½	90%	51.5-54.5	4.15			Finely laminated barite with numerous 1" siliceous
			54.5-56.5	4.07			layers containing abundant barite-filled fractures.
							Slump features at 56½.

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
56½	90	90%	56.5-58.5	3.58			Fault zone at 57', rock silicified. 57½'- 3" layer
			58.5-62	3.93			ls. Bedding 25° from perpendicular to hole. 6"
							massive barite at 58' followed by 6" laminated
							Ba containing Ba filled fractures. 9" layer ls
							at 61'. Laminated barite on last 6"
62	67	85%	62-67	4.23			Top 6" layer ls then massive barite w/ fine
							laminations. Looks like high grade.
67	72	95%	67-72	4.35			Ditto - becoming slumped in lower 6".
72	77	95%	72-75	4.37			Ditto - siliceous layer ½" thick at 72', laminated
			75-77	3.86			at 76" amd limey 76-77'.
77	82	95%	77-79	3.94			Massive to finely laminated to 80½' becoming more
			79-81.25	3.88			laminated then coalescing nodules & nodular
							layers at 81½'.
82	85	60%					Fault zone at 82' slickensides evident. Scattered
							nodules in upper portion in carbonaceous shale
							which is more siliceous downward. Several layers
							of coalescing nodules.
85	90	90%					85-87' abundant siliceous layers_ coalescing nodular
							layers 40% of rock at top increasing to 80% in lower
							part. 87-90' laminated barite with some nodular

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES $BaSO_4$	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
90	92	85%					Broken laminated barite w/ several ½" siliceous layers.
92	96½	95%					Massive laminated gray barite 92-94'. 94-96½'
							becoming more argillaceous w/ coaliscing nodular
							beds increasing toward 96½'.
96½	99	95%					Nodular barite beds w/ 40% barite at top decreasing
							to 10% at bottom. Matrix is black carbonaceous
							shale.
99	104	95%					Bedding is 15° from perp. to core. Black shale w/
							scattered barite nodules @ less than 10% of rock.
							Becomes highly carbonaceous at 102'. Dilatant
							zone at 101' has white clay in openings.
104	109	85%					Black carbonaceous shale. Pyrite nodules at 105'.
							Widely scattered barite nodules.
109	112	65%					Laminated & nodular barite w/ abundant argillaceous
							bands. Fracture paralleling core at 110' is
							filled w/ dickite(?).
112	117	90%					112-113' laminated barite w/ several 1" siliseous
							zones & a large dickite(?) filled fracture
			116.5-119	3.58			paralleling the core. Bedding is 10' from
							perpendicular to core. 113-117' Calcareous
							laminated barite w/ dickite(?).

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: Tom Garagan begin at 133'

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
117	122	90%	119-121	3.91			Calcareous massive barite. Several 1" layers of
			121.5-124	3.91			siliceous material.
122	127	90%	123-127.5	4.12			122-123' slumped laminated barite. 123-125 broken
							barite w/ abundant argillaceous layers 125-127.
							Massive laminated barite grading into coalescing
							nodules. Several 1" siliceous layers.
127	132	85%	130.5-131	4.21			Massive laminated barite. 128-130 Porous, punky
							calcareous zone. 130-131½ laminated barite
							becoming nodular at bottom. Last 2" black shale-
							some barite nodules.
132	133	95%					Black shale w/ scattered nodules
133'4"	179'8"	95%	134.5-137	4.01			Barite: argillaceous medium bedded - interbedded
							Argillaceous barite: Laminated barite w/ carbonaceous
							shale seams every 1/16". Core angle 10°. The
							argillaceous barite only occurs in the upper part
							of the unit in the following sections:
							133'4" - 135'3" (The unit is correlated
			137-140	4.17			136'9" - 137'8" w/ W. M's coalescing
							138'10" - 139'5" barite nodular zone)
							139'10" - 140'2"

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
							The remainder of the unit consists of thinly bedded
							to medium bedded barite w/ some carbonaceous shale
			140-143.5	4.08			seams (1/8" - 1" - several" apart)
							The barite is slightly calcareous locally: 6" at135'
			143.5-147	4.31			& 4" at 148'. The barite is also interbedded w/
							limestone in three locations w/ barite & limestone
							usually occuring in approximately equal proportions:
			149-152	4.23			5" at 145', 6" at 154"
			152-154	4.07			30% ls from 175'5" - 178'10"
			154-156	4.37			This ls is also cut by several thin calcite veins.
			156-158	4.30			The barite shows several soft sediment deformation
			158-160	4.33			features w/ slumping & flame textures.
			160-162	4.34			A 5" by ¼" vertical worm burrow occurs at 135'3".
			162-164	4.03			A few thin barite veinlets are present 149' -end of
			164-166	4.34			section
			166-168	4.26			Limonite stained shears at 145', 149', 162' - near
			168-170	4.27			surface fracturing & ground water movement along
			170-172	4.32			minor fractures. Dickite at 162'
			172-174	4.29			Trace gypsum on fracture surface at 178'8" carbonaceous
				4.30			shale massive w/ 25% graphite.

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
			176-178	3.69			Trace gypsum on fracture surface at 178'8" carbonaceous shale - massive w/ 25% graphite.
179'8"	180'3"	100%	179-179'8"	4.36			
180'3"	181'8"	100%					Carbonaceous shale w/ thin lenses of nodular barite-
							15% nodular barite lenses: lenses are very fine
							grained to fine grained barite nodules which occur
							1/10 - 1/4" lenses: The nodules coalesce to
							form thin layers.
181'8"	182'10"	100%		4.08		182-182.5	Ba/ls: probably a baryto calcite lense w/ 5% carbonaceous
							seams. The upper 4" contain a 2" diameter siliceous
							barite nodule.
182'10"	191'3"	85%					Carbonaceous shale interbedded w/ chert-well bedded
							in places: bedding core angle 25°.
							The chert beds average 1-3" thick but are up to 10"
							thick. Unit is 30% chert. 10% barite occurring
							in three forms: 1) very fine grained nodules
							occurring in seams as in 180'3" - 181'8" 2) thin
							bedded laminated barite interbedded w/ shale in
							2.5" bed @ 184.6" and a 2" zone at 190'. Show some
							slumping features. 3) zones of large individual
							nodules between 1/8" & ½" diameter w/in both chert

DRILL HOLE RECORD

Drill Hole No.: 5 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

Acid angle at 202=53°uncorrected

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
							& shale zones; occur as follows: 186' - 10" thick
							w/ 5% nodules, 187'3" thick w/ 10% nodules, 191'
							thick w/ 40% nodules.
191'3"	202	95%					Chert w/ 10% zones of barite & 10% pyrite seams & nodules
							The barite occurs as individual nodules & as coalescing
							zones of fine grained nodules as follows:
							195' - 12" thick occurs as fine grained to med
							grained nodules (50%) and as thin beds of fine grained
							nodules interbedded w/ fine grained pyrite (50%)
							with each bed being 1" thick.
							197'2"-- thick 40% med grained nodules &
							coalescing fine grain nodules.
							197'8" thick 40% barite - coalescing nodular seams.
							199' 10" thick 40% barite laminated zones of
							fine grained nodules & zone of med grained nodules.
							200'7" - 202' - 20% barite barite occurs predominantly
							as individual med grained nodules in zones w/ some
							seams of coalesced fine grained nodules. This zone
							contains minor carbonate at 201'.
							EOH

Pyrite occurs in thin seams (1/16" - 1/8" average) within 10% of the rock. The seams are up to 1" ~~thick (196') and contain 50% pyrite.~~ The seams are parallel to bedding at 10°(90°parallel to core). Pyrite also occurs as medium grained nodules (up to ~~1/8" in diameter) w/in the massive cherty zones~~ (ie no barite) Nodules occur in 1 - 2% of the rock, thin quartz veins at 193'5" core angle = 60°

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: 54°S

Property:

Co-ordinates: North 10,155.06 East 8,842.36

Elevation: 1,461.53

Date: July 6, 1986 - July 7, 1986

Drilled By: Caron Diamond Drilling Jim Bartlett Lech Wojocowski

Logged By: A. W. Mitchell

Total Depth:

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
0	10	3%					Bedding 20°from perpendicular to core. Small nodules in argillaceous matrix = 60%. Calcareous in part.
10	12	15%					Ditto - shale layer at bottom w/ rare nodules.
12	14	15%					Massive laminated barite calcareous.
14	19	70%	17.5-19	3.25			Massive clacareous barite. ½" argillaceous layers at 14½. A ½" calcite vein crosscuts core at 18½. Fractured except bottom foot.
19	21	50%					Massive to laminated aarite calcarious in upper part. Highly broken.
21	23	75%					Broken Laminated to nodular barite. Slumped in lower part.
23	24.5	90%	23-24.5	4.08			Broken upper 9". Coalescing nodular beds in upper grading into laminated at bottom.
24.5	28	85%					Laminated barite upper 6" and lower 5" w/ punky brown material including some Ba in between.
28	32	75%	27.5-29	4.23			Punky brown material which partly washed away.
			29-31	4.33			Massive laminated barite w/ occassional 1/8" siliceous layer makes bulk of interval.
32	37	90%	31-33	4.22			Massive barite, a few laminations.
			33-35	3.62			Siderite(?) and calcareous barite at 33

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
			35-37	3.89			Slumped at 35' w/ more included argillaceous material.
							Broken at 36 w/ punky tan material = 2"
37	42	80%	38-39½	4.45			9" punky tan to gray material (leached carbonate?)
			40-42	3.98			1' massive to minor laminated barite
							4" argillite w/ a few barite veinlets & nodules lower
							1' slumped, fractured, laminated barite.
42	47	95%	42-44	4.20			Massive laminated barite w/ abundant slump features.
			44-46	3.98			Red brown & tan punky zones at 42½ (4") 43(1").
			46-48	3.90			45-46 mixed barite & punky tan material. 5'
							calcareous 44½ & 47.
47	52	95%	48-50	4.23			Massive barite widely spaced laminations.
			50-52	4.40			Calcareous top 2", ⅝" at 48.
52	56½	95%	52-54.5	4.06			Massive barite w/ some laminations. Disrupted bedding
							at 52 (worm tube?) Lower 2' is thick bedded shale
56.5	61.5	90%	56-59	4.16			w/ scattered nodules up to ¼" across. Massive
			59-61	4.11			barite rare laminations. 1" tan punky at 59 & 61.5.
61.5	66.5	95%	61-63	4.12			
			63-65	4.32			Ditto 2" punky zones at 61.5, 63, 66 & 66.5
							Calcareous at 62(4"), 63½(6")
66.5	72	90%	65-67	4.15			
			67-69	4.39			Ditto bedding crossed core 15° from perpendicular.
			69-71	4.40			
			71-73	4.27			Calcareous at 66.5 (4"), 68(½") 72(½")

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
72	77	80%	73-75 75-78	4.21 4.32			Massive barite punky zone 6" at 74'.
							Calcareous at 72 (½") & on margins of punky zone.
77	80	100%					Upper 1' massive barite becoming laminated in lower
							portion. Remainder black carbonaceous argillite
							w/ scattered ¼" layers of nodular barite. Bedding
							planes 30° from perp to core. Slicks on bed planes
80	82	95%					Black argillite w/ very finely disseminated pyrite 2%
82	87	90%					Ditto rare barite nodules
87	91	80%					Ditto
91	96	80%					Upper 6" argillite w/ barite nodules increasing
							downward. Remainder laminated barite w/ 30%
							argillaceous beds. lower 6" argillite w/ scattered
							nodules. Small fractures perp. to bedding common.
96	101	85%	98-101	3.33			Top 4" argillite. Remainder calcareous barite(?).
			103-106	3.28			Large calcite vein at 97'. Tan punky material makes
							½ core 100-101. This zone crosscuts bedding.
101	106	80%					Upper 2' punky tan to red brown material w/ rare
							barite layers. Remainder massive ls 5" calcite
							vein @ 106' Bedding 35° from perp to core.

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
106	111	75%					Slumped argillite & calcareous barite w/ crosscutting quartz veinlets in upper 9". Then nodular barite & argillaceous material followed by 2" breccia zone cemented by quartz. 2" argillite & nodular barite slumped & brecciated in part. Veined w/ barite Lower 1' is laminated barite w/ lower 2" punky red-brown calcareous material.
111	116	85%	110.5-113	3.37			Massive calcareous laminated barite. Several calcite veins at 112' up to ½" wide.
			113-115	3.62			
116	121	90%	115-117	4.08			Massive laminated barite calcareous 117 to 120.
			117-119	3.56			9" calcite vein at 119. Lower 2' SG. Bedding 45° to core. 1" argillite layer at 116'.
			119-121	3.91			
121	126	95%	121-123	3.90			Massive laminated barite. Several 1" argillite layers in upper 1'. A 1" calcite vein at 125.
			123-125	4.18			
			125-127	4.01			Broken 125-126. Calcareous layers @ 122, 125, 126.
126	131	95%	127-129	4.15			Massive laminated barite ½" punky layer at 127½.
			129-131	3.98			Several small fractures perp to bed. Calcareous layers at 128, 129, 131.
131	136	85%	131-133	4.26			Massive laminated barite. Several ½" argillite layers in upper 1'. Lowest 4" 50% shale in ¼" lenses.
			133-135.5	4.32			

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: W.M. 0-162 Tom Garagan 162-EOH

Elevation: _____ Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
136	141	95%	136-138	4.30			Massive laminated barite. Top ¼" punky.
			138-140	4.31			Lower 4" slabby.
141	146.5	85%	140-142	4.34			Massive laminated barite ¼" arg. at 143 ½" punky
			142-144	4.01			material @ 143½ & along one edge of core to 144.
			144-146.5	4.18			Calcareous 145-146. Fracture parallels core.
146.5	152	90%	148-150	4.19			Upper 6" red-brown punky zone.
			150-152	4.25			Remainder laminated barite. Vuggy zone w/ limonite
							at 151'. Laminations chaotic at 152'.
152	157	90%	152-154.5	4.08			Slumped zone at 152. Upper 3' laminated barite
							becoming more argillaceous downwards. Lower 2'
							argillite w/ quartz veinlets perp to bedding.
							Scattered nodules barite . Two 4" barite beds just
							above 157. Calcareous 152-152.5.
157	162	90%					Laminated barite w/ up to 30% argillaceous material
							in parts. Calcite veins 159'.
162	163.5	75%					Interbedded argillite & barite - 50% barite: laminated
							to thin bedded - grades into a zone of nodular
							barite at the w/ 15% fine to medium grained
							nodules. The argillite is carbonaceous.

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH		SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES			DESCRIPTION OF MATERIAL DRILLED
FROM	TO			Sp. Gr.	BaSO4	Cond.	
163.5	175						Siliceous argillite w/ 10% laminated & nodular barite & 10% laminated to thin bedded pyrite: correlates w/ 191 to EOH in hole #5. The upper part of unit is carbonaceous. Barite occurs in the zones of laminated barite & coalescing nodules as follows: 164'6" -thick, 168'10" - 5½" thick interbedded barite, pyrite, & minor argillite, 170'7" - 2" thick, 171'8" 2" thick overlain by bed of pyrite w/ 20% argillite, also contains 10% disseminated pyrite w/in the barite. 172'9" - 9" thick laminated grading down into nodular barite: 25% barite w/ 5% pyrite. Quartz veins & breccia at 166'6". Quatrz veins cut the core at a very shallow angle (5-15° from vertical) Calcite vein at 169.
175	177	95%					Laminated & nodular barite w/ 40% argillite: barite occurs as a series of several coalescing lenses, ,slump features are common & also contains what looks like argillite rip up clasts near top of zone. Calcareous layers at 176.

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
177	181	95%					Cherty argillite as in 163.5-175 with 15% baritic layers
							Fine grained to med grained pyrite nodules from 180-181
							Quartz veins w/ some calcite sub parallel to core
							axis at 179-181.
181	183	95%					Laminated & coalescing nodular barite as in 175-177'
183	186.25	80%					Calcareous at 181. Cherty argillite w/ 5% fine grained
							to med grained pyrite nodules.
186.25	187.25	100%					Laminated barite & argillite as in 175-177
187.25	188.25	100%					Cherty argillite w/ 1-2% fine grained pyrite nodules
188.25	193.75	90%	188.5-191	4.21			Laminated barite w/ 15% argillite & minor limestone.
			191-193	4.18			Contains some fine grained nodules w/in the
							argillaceous layers & a few slump features. 4"
							mottled & fractured zone at 191°. Calcareous 191.
							192-195.
193.75	250	90%	193-195	4.00			Massive laminated barite w/ 5% argillaceous layers
			195-197	4.25			1/8"-1/10" thick: argillaceous layers up to 2" thick
			197-199	4.27			at 197.5', 200.5', 213'. Argillaceous units occur
							as fine laminations & wedges layer at 197.5 has a
							limonite stained upper contact. Calcareous 200-201,
							211.211.5.216. 221-222. 226. 230-231. 238. 24.5-241.

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
		6" core lost at 212'	199-201	3.98			Appears to be limestone beds at 194 for 2", 222 for 6",
			201-203	4.29			226 for 4", 245 for 1".
			203-205	4.29			A zone of intense calcite veining & brecciation occurs
			205-207	4.31			from 228½ to 229¼ for 4" at 221' & for 4" at 212',
			207-209	4.35			¼" at 216'.
			209-211	4.03			
			211-213.5	3.85			Barite bedding is contorted at 238.5'
			213.5-216	4.15			
			216-218	4.11			Punky limonite clay +/- carbonate & leached zone for
			218-221	4.19			4" above 240'. Limestone fracture 233'
			222-224	4.26			
			224-226	4.28			
			226.5-228.25	4.27			Bedding core angle throughout zone averages ~30°
			230-232	4.13			
			240-242	3.95			Barite laminated to thin bedded interbeded w/ lam.
			242-244	4.04			
			244-246	3.96			to thin bedded black chert argillite - 30% argillite
			246-248	4.10			
			248-250	4.15			beds of argillite are up to ¼" thick & contain thin
250	252	100%	250-252	3.93			
							quartz tension gashes perpendicular to bedding.
							Small load structures are common in this unit.
252	255	100%	252-255	4.02			The barite locally consists of fine nodules.
							Massive laminated barite as in 193.75-250'
							Contact w/ underlying cherty argillite is gradational
255	257.5	100%					Bedding is truncated at 255'
							Massive black pyritic chert w/ chert argillite &
			258-261	4.25			barite at top of unit. Bedding is contacted at top

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
							of unit & contains quartz tension gashes in cherty
							layer. Bedding at 35° to core (90° = 11 to core) in
							cherty layers is truncated by barite lamellae at 15°
							core angle at top of unit. Chert contains 5% medium
							grained pyrite nodules.
257½	269	90%	261-263	3.83			Massive laminated to thin bedded barite w/ 5% argillite
			263-265	4.05			lamellae: ½" thick chert layer w/ tension gashes at 267'
			265-267	4.15			1½" zone of calcite veining at 264½'
			267-269	4.25			Barite is thick bedded from 202'-263'
							Much of the section from 267 is slightly calcareous.
269	269.75	100%	269.5-272	4.17			Black pyritic chert, argillite: upper contact
							gradational, lower contact sharp.
269.75	299	95%	272-274	4.30			Barite: laminated, massive with 5-7% argillite seams
			274-276	4.26			1/10" thick. 4" pyritic & baritic cherty argillite
			276-278	4.12			at 272'. 1" thick chert w/ quartz filled tension
			278-280	4.16			gashes at 274'.
			280-282	4.24			Hematite stained highly fractured & quartz veined
			282-284	4.24			Baritic (25%) argillite from 290-296. Calcareous at 292'
			284-286	4.17			Siliceous barite at 279.5' & from 288½ to 289'
			286-288	4.26			Bedding core angle = 35%. clay filled fracture at 284
			288-290	4.30			
			290-292	4.19			
			292-294	4.34			
			294-297	4.18			
			297-298.7	4.20			

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
299	299.75	100%	299-300	4.17			Black pyritic cherty argillite w/ 5% very fine grained
							Disseminated pyrite bedding core angle = 40°
299.75	300'10"						Laminated barite w/ 10% argillaceous lanellae:
							upper & lower parts of unit more argilleous.
300'10"	301'3"	100%	301.5-304	4.25 4.25			Black pyritic cherty argillite w/ 10% lenticular to
							tear drop shaped barite nodules & some anellae at
							bottom of unit.
301'3"	306½	100%	304.5-307	4.13			Massive medium bedded barite with 1-2% argillite
306¼	306½	95%					lamellae graphitic argillite w/ slickensides on bedding
306½	332	95%	307-309	4.35			surface. Massive laminated to med bedded barite w/
			309-312	4.33			2-5% argillite lamellae. Slightly siliceous at the
			312-314	4.37	322-324	4.38	top & bottom of the section. Syndepositional faults &
			314-316	4.36	324-326	4.41	slumps are common in the bottom 1'
			316-318	4.34	326-328	4.35	Slumping & load structure present in the top 2'
			318-320	4.32	328-330	4.28	Beddeng core angle = 40°
			320-322	4.38	330-332	4.34	Clay filled fracture at 311', 313'
332	332¼	90%					Carbonaceous & pyritic black argillite w/ 10% large
							lenticular (1"/¼") to round (¼"/⅜") shaped baritic nodules
332¼	333¼	100%					Massive laminated barite w/5-7% argillite lanellae

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
							quartz microfractures perpendicular to bedding.
333¼	335	90%					Graphitic & pyritic cherty argillite w/ extremely graphiti
							lower contact (fractured?) & gradational upper
							contact. Loader & flaser bedding along upper
							contact. Central 1' of unit contains 30% quartz
							veining (veins up to 3" thick) at 45° to core axis.
335	345½	95%	335-337	4.19			Massive laminated to medium bedded barite.
			337-339	4.26			Upper 1½' is cut by several microfaults which offset
			339-341	4.11			bedding by ¼ - 1". The fractures usually contain
			341-343	4.19			minor quartz. The barite is siliceous from 339'
			343-345.5	4.32			to end of section. Quartz vein 341'. Clay fracture
							at 340.75', 341.75'. Possible syndepositional fault
							offsetting bedding by 3"-4" runs parallel to the
							core for about 1' at 344'. Bedding is also contorted
							in same area, bedding core angle at 50°.
345½	362	85%					Black pyritic chert - cherty argillite - rock was
	EOH						hard w/ slow drilling: upper contact is carbonaceous
							& unit is slightly carbonaceous throughout. Upper
							3' contains 15% lenticular shaped & rounded, large

DRILL HOLE RECORD

Drill Hole No.: 6 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
							nodules which decrease in abundance to 2-3% for rest of
							hole. Extremely broken up. Core is carbonacious
							argillite from 357-357½ & from 358½ -359½ (≈60-85%
							recoveries in these zones).
							Rock is strongly quartz veined at: 346', 352', 359½'
							& 360½'
							Bedding core angle: 45°.
							Acid test uncorrected 57%

DRILL HOLE RECORD

Drill Hole No.: 7 Inclination: 90°

Property: Tea

Co-ordinates: North 10,103.25 East 9,053.29

Elevation: 1,355.70

Date: July 8-July 9, 1986

Drilled By: Caron Diamond Drilling

Logged By: A.W. Mitchell

Total Depth: 207'

~30°S of Emily posts in main pit.

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
0	11	8%					Barite broken massive.
11	16	85%					Top 6" mud then remainder laminated barite becoming
							more massive downward. Bedding 35°.
16	21	90%					Upper 2' punky mud. Remainder brecciated chert.
							some barite in lower 6" of breccia.
21	26	90%					Quartz veined chert.
26	31.5	85%					Upper 18" ditto followed be 2' slumped barite w/ rip
							up clasts of chert then remainder tan mud.
31.5	36.5	80%	31.5-34	3.70			Laminated to massive w/ 2-6" punky zones. Calcareous throughout
36.5	42	90%	36.5-39	4.26			Ditto Bedding 30° from perpendicular.
			39-42	4.26			Upper 4" calcareous.
42	47	100%	42-45	4.11			Laminated barite calcareous in lower 3' w/ a brown
			45-48	3.82			punky zone 3".
47	52	90%	48-51	4.14			Ditto 4" calcareous zone @ 50'
			51-54	4.04			Argillaceous material becoming more abundant down.
52	57	95%	54-57	4.02			Laminated barite two 6" calc-zones 54-57'
57	62	85%	57-60	4.28			Ditto Calc up 3" w/2" Fe stained zone below.
			60-63	4.13			Bedding 50° from perendicular.
62	67	95%	63-66	4.08			Laminated barite upper 6" calc pods.
			69-72	4.34			Abundant argillaceous material upper 2', calc 66'.

DRILL HOLE RECORD

Drill Hole No.: 7 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
67	72	90%	69-72	4.17			Laminated barite.
72	77	95%	72-75 75-78 78-81	4.22 4.28 4.17			Laminated to massive barite.
77	82	90%	81-84	4.05			Ditto calc lower 9"
82	87	90%	84-87	4.16			Ditto 6" shale at 86'
87	92	80%	87-90 90-93	4.26 4.32			Ditto 4" calc at 90'
92	97	95%	93-96	4.34			Ditto becoming more massive.
97	102	80%	96-99	4.26			Laminated barite 1" calc at 97' & 6" at 98".
			99-102	4.31			More argillaceous at 102'
102	107	90%	102-105	4.24			Laminated barite. Slumped in upper portion.
			105-108	4.32			Calc punky zone at 103'
107	112	80%	108-111 111-113	4.42 4.34			Ditto fracture parallels core filled w/ white material.
112	116	80%					Ditto
116	121	80%					Laminated barite upper 6" then brecciated.
							Barite cemented w/ white to 120 then 1' limestone.
121	126	90%					Upper 18" massive barite grading downward to laminated
							barite then nodular then argillite (siliceous shale).
126	131	90%					Argillite (siliceous shale) upper 1' then 9" slumped
							barite then 6" argillite then fractured laminated Ba
131	136	95%					Upper 18" laminated to massive Ba then argillite w/ Ba
							nodules decreasing downwards.

DRILL HOLE RECORD

Drill Hole No.: 7 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
136	141	90%					Siliceous shale massive w/ minute quartz veinlets
							crossing bedding. Bed 30° to perp.
141	146	100%					Ditto 1/8" pyrite layer at 141.5.
146	151	100%					Ditto very graphitic on slip planes.
151	154	50%					Ditto Highly broken. Ba crystalls.
154	177	90%					Siliceous shale 8" brecciated barite @ 164. 171½
							limestone 176½-177. Pyrite disseminated at 167, 172-174
177	182	80%					Limestone calcite veined.
182	187	90%					Siliceous shale brecciated in part.
187	192	90%					Argillite grading downward to mixed barite & argillite
							w/ calcite veins & pyrite disseminated. Lower 1' barit
192	197	90%					Massive barite. light gray 1' then siliceous shale 3'
							then 1' mixed barite shale & clacite.
197	202						Laminated barite grading sownwards to shale & nodular zon
202	207						Siliceous shale w/disseminated nodules. Bedding
							angle 50° from perp. to core.

DRILL HOLE RECORD

Drill Hole No.: 8 **Inclination:** 48° N 5° W

Property: Tea

Co-ordinates: North _____ East _____

Elevation: _____

Located at far south slope near 51

Date: July 10 - July 12, 1986

Drilled By: Caron Diamond Drilling

Logged By: A. W. Mitchell

Total Depth: 200

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
0	11	20%					Limestone w/ some shale bedding nearly perp.
11	19	90%					Ditto
19	22	90%					Calcareous barite.
22	27	95%					Ditto becoming non calcareous last 1'.
27	32	90%					Calcareous barite some 4" layers non calcareous.
32	37	95%	32-35	3.93			Massive barite several small calcareous layers.
			35-40	4.03			Brecciated at top. Beds nearly perp to core.
37	42	80%					Massive barite becoming nodular & scattered nodules last 6"
42	47	80%					Siliceous shale 1' then scattered nodules becoming
							more massive last 1½'.
47	52	85%					Laminated barite w/ considerable argillaceous material
							upper 2' then siliceous shale w/ scattered nodules
							2' then laminated remainder.
52	57	85%	55-59	3.91			Massive laminated- good grade.
57	67	90%	59-62 62-65	3.98 3.97			Ditto more argillaceous material last 6" 1' calc at 59' 6" calc at 63'
67	70	95%	65-68 68-71	3.90 4.03			12" calc at 67. Massive broken barite.
70	75	95%					Massive laminated barite last 6" calc
							2 bands of 1" thick shale at 71'
75	76	95%					Ditto

DRILL HOLE RECORD

Drill Hole No.: 8 Inclination: _____ Date: _____

Property: _____ Drilled By: _____

Co-ordinates: North _____ East _____ Logged By: _____

Elevation: _____ Total Depth: _____

DEPTH FROM	DEPTH TO	SAMPLE RECOVERY	SAMPLE NUMBER	ANALYSES Sp. Gr.	ANALYSES BaSO4	ANALYSES Cond.	DESCRIPTION OF MATERIAL DRILLED
76	85.5	85%	76-79 79-82	4.04 4.12			Massive barite laminated in part last foot. Mixed barite & argillite calc77',79'.
85.5	111	90%	85-88 88-91	4.28 4.13	91-94 94-97	4.20 * 4.17 *	Massive barite calc 97,90,101,107-110.
111	115	80%					Siliceous shale upper 18" remainder massive laminated Ba.
115	120	80%					Massive laminated barite calc 9" at 118' last 14" siliceous shale.
120	130	85%					Siliceous shale scattered nodules becoming layers bottom 4".
130	139	90%					Massive barite w/ some mixed arg material coarsely crystalline.
139	169.5	95%					Massively bedded fine grained barite calcareous 140', 148', 153', 158-159.5', 162', 163-165'
169.5	195	95%					Siliceous shale w/ varying amounts of scattered nodules.
195	200	90%					Siliceous shale w/ 3 6" limestones layers.
			*97-102	4.20	135-138	4.08	156-159 4.05
			102.5-106	4.35	138-141	4.10	159-162 4.09
			106-109	3.70	141-148	4.06	162-165 4.03
			109-111	3.98	148.5-150	4.17	165-169.5 4.20
			113-116	4.04	150-153	4.31	
			132-135	4.24	153-156	4.07	

APPENDIX 6

ORE RESERVE CALCULATIONS
Bed 1

Section 1

hole 5 True Thicknesses

12' @ 4.28 and 22' @ 4.15
40x12= 480 square feet
94x22= 2068 " "
1/2x22x41= 451 " "
1/2x22x18= 198 " "
TOTAL 3197 " "

Proven Ore 100'W 85'E

185x3197=591,445 cubic ft. / 8 cubic ft/ton=
73,930 tons @ 4.17

Section 2

hole 2 Proven ore 85'W 35' E
upper @4.225
12x34= 408
1/2x12x18= 108
1/2x12x11= 66
TOTAL 582 square feet

lower @ 4.218
13x72= 936
1/2x13x12= 78
1/2x13x13= 84.5
TOTAL 1098.5
GRAND TOTAL 1680.5 square feet

1680.5x120=201,660 cubic ft /8= 25,207 @ 4.22

hole 7 Proven ore 85' W 35' E

4.25 for 25' True Thickness
25x68= 1700 square feet
1/2x25/14= 175
1/2x25x48= 600
15x25= 375
TOTAL 2850 " "

120x2850=342000 cubic ft. /8= 42,750 tons @ 4.25

SUMMARY BED 1

73,930 @ 4.17
25,207 @ 4.22
42,750 @ 4.25
TOT 141,887 @ 4.203

Bed 2

Section 1
hole 5
proven 100' W 100' E
30' true thickness @ 4.28
30x160=4800 sq ft x200=960,000/8=120,000 tons
indicated @ 4.28
94x30= 2820 sq ft
1/2x70x30= 1050
TOTAL 3870 " "
3870x200=774,000/8=96,750

hole 6
proven 100'W 100'E
10' true thickness @ 4.31
10x200=2000 sq ftx200=400,000 cu ft/8=50,000 tons
indicated
10x100=1000 sq ftx200=200,000 cu ft/8=25,000 tons
inferred
1/2x70x10=350x200=70,000/8=8750 tons

Section 3
hole 4 100'W 30'E
proven
1/2x30x95= 1425 sq ft @ 4.248
1/2x70x95= 3325 @ 4.217
TOTAL 4750 " " @ 4.226
4750x130= 617,500/8=77,187 tons
between sections 1 and 3
indicated
hole 5 @ 4.28 8670 sq ft
hole 6 @ 4.31 3000
TOTAL 11670 " " x60=700,200 cu ft/8=
87,525 tons @ 4.288
inferred
350 sq ft x60=21000/8=2625 tons @ 4.31

SUMMARY BED 2

Proven	Indicated	Inferred
120,000 @ 4.28	96,750 @ 4.28	8750 @ 4.31
50,000 @ 4.31	25,000 @ 4.31	2625 @ 4.31
771,875 @ 4.226	87,525 @ 4.228	----------
----------	----------	11,375 @
247,187 @ 4.269	209,275 @ 4.262	4.31

OVERALL TOTAL

467,837 tons @ 4.267

BED 3

Section 1
hole 6 100'W 100'E
proven
110' True Thickness @ 4.195
110x200x200=4,400,000 cu ft /8= 550,000 tons
indicated
110' True Thickness @ 4.195
110x80x150=1,320,000 cu ft/8=165,000 tons
TOTAL PROVEN AND INDICATED TONS 715,000 @ 4.195

RESERVE SUMMARY

Bed 1	Bed 2	Bed 3
Proven	Proven	Proven
141,887 tons @ 4.203	247,187 @ 4.269	550,000 @ 4.195
	Indicated	Indicated
	209,275 @ 4.262	165,000 @ 4.195
	Inferred	
	11,375 @ 4.31	

TOTALS

PROVEN 939,074 @ 4.216
INDICATED 374,275 @ 4.246
INFERRED 11.375 @ 4.305

DAWSON
METALLURGICAL
LABORATORIES, INC.

P.O. Box 7685
5217 Major Street
Murray, Utah 84107-0685
Phone: 801-262-0922

June 3, 1986

Eisenman Enterprises
1612 1st Avenue
Greeley, Colorado 80631

Attn: Mr. Ed Eisenman

Subject: Results of Hand Jig Tests on Barite Ore Samples, Designated Our Project No. P-1249.

Gentlemen:

In accordance with our discussions Mr. Wallace Mitchell came to our laboratory on May 29, 1986 to observe our laboratory procedures for making specific gravity analyses on barite samples and conducting hand jig tests. Mr. Mitchell brought to our laboratory channel cut samples for compositing (P-1249-A) and an ore stock pile sample (P-1249-B).

Mr. Mitchell picked out three rocks from the stockpile sample for specific gravity analysis and showed the following:

	Specific Gravity
1	4.30
2	4.10
3	4.39

All specific gravities were conducted using a LeChatelier bottle in a kerosene medium.

In the hand jig test it was found to be most effective to remove the minus 20 mesh from the crushed ore (Sample P-1249-A to minus 1/2 inch and Sample P-1249-B to about minus 1 inch) and then to successively hand jigged using 3, 8, and 20 mesh 8 inch sieves.

Although the analyses on the individual rock samples showed specific gravities of 4.30 to 4.39, the hand jig test results did not show sink products this high. Results are summarized in the table on the following page.

Product	Channel Cut Comp. % WT	Channel Cut Comp. Sp. Gr.	Ore Stock Pile % WT	Ore Stock Pile Sp. Gr.
-1/2"+3M Sink	32.4	4.17		
Float	9.6	3.86		
-1"+3M Sink			37.7	4.19
Float			15.7	3.96
-3+8M Sink	17.0	4.21	13.5	4.25
Float	6.1	3.86	7.7	3.85
-8+20M Sink	11.4	4.08	5.3	4.27
Float	1.7	3.92	4.1	3.90
Comb. Sink	60.8	4.18	56.5	4.21
Float	17.4	3.91	27.5	3.93
-20M	21.8	4.10	16.0	3.96
Head (calc)	100.0	4.11	100.0	4.10

With the relatively high specific gravities in the float products and marginal gravities in the concentrates (sink product) it appears that consistantly obtaining a 4.2+ specific gravity product could be difficult and considerable barite would be lost in the float product. Further testing is required on samples from other areas of the ore body to determine if there are any marked variations in the ore body.

We understand that Mr. Mitchell is planning to conduct drilling, sampling, and testing at the mine site to further evaluate the property. If check analyses and/or testing is desired we would be pleased to work with you.

Very truly yours,
DAWSON METALLURGICAL LABORATORIES, INC.

Harmel A. Dawson,
President

cc: A. Wallace Mitchell

HAD-cac

DAWSON
METALLURGICAL
LABORATORIES, INC.

P. O. Box 7685
5217 Major Street
Murray, Utah 84107
Phone: 801-262-0922

PROJECT NO. P-1249
DATE 5/29/86
BY LA

Specific Gravities

TEST NO. _____ NAME Eisenman Industries

Selective Rock Samples

PRODUCT	Weight	PERCENT WEIGHT	ASSAY	UNITS	DISTRIBUTION
			SP. GR.		
Sample A			4.30		
Sample B			4.10		
Sample C			4.39		

OPERATION	GRINDING PRODUCT
TIME	
REAGENTS - LBS PER TON	
	MESH / %
	+10
	+14
	+20
	+28
	+35
	+48
	+65
	+100
	+150
MACHINE	+200
R P M	+325
pH	-325
% SOLIDS	
TEMPERATURE	

REMARKS:

DAWSON
METALLURGICAL
LABORATORIES, INC.

P.O. Box 7685
5217 Major Street
Murray, Utah 84107
Phone: 801-262-0922

PROJECT NO. P-1249-A
DATE 5/29/86
BY HAD
Comp Channel Cuts

TEST NO. 1 NAME Eisenman Enterprises

Jig Test

PRODUCT	Weight	PERCENT WEIGHT	ASSAY		UNITS		DISTRIBUTION	
			% WT	SP. GR.	SP. GR.			
-1/2" +3 Sink	3224	32.4	77.1	4.17	1.35			
Float	958	9.6	22.9	3.86	.37			
		42.0	100.0	4.10	1.72			
-3 +8 Sink	1692	17.0	73.6	4.21	0.72			
Float	607	6.1	26.4	3.86	0.24			
		23.1	100.0	4.16	0.96			
-8 +20 Sink	1131.0	11.4	87.0	4.08	0.47			
Float	168	1.7	13.0	3.92	0.07			
		13.1	100.0	4.12	0.54			
-20 Mesh	2160	21.8		4.10	0.89			
Head (calc)	9940			4.11	4.11			
							GRINDING PRODUCT	
Comb. Sink			60.8	4.18	2.54			
Comb. Float			17.4	3.91	0.68			
							MESH	%
							+10	
							+14	
							+20	
							+28	
							+35	
							+48	
							+65	
							+100	
							+150	
MACHINE							+200	
R P.M.							+325	
pH							-325	
% SOLIDS								
TEMPERATURE								

REMARKS:

DAWSON
METALLURGICAL
LABORATORIES, INC.

P. O. Box 7685
5217 Major Street
Murray, Utah 84107
Phone. 801-262-0922

PROJECT NO. P-1249-B
DATE 5/29/86
BY HAD

Ore Pile

TEST NO. 1 NAME Eisenman Enterprises

Jig Test

PRODUCT	Weight	PERCENT WEIGHT	ASSAY			UNITS	DISTRIBUTION
			% WT	Sp. Gr.		Sp. Gr.	
-1" +3M Sink	3742	37.7	70.6	4.19	2.15	1.58	
Float	1561	15.7	29.4	3.96	1.164	0.62	
	5503	53.4	100.0		4.142	2.20	
-3 +8M Sink	1338	17.5	63.7	4.25	2.707	0.57	
Float	762	7.7	36.3	3.85	1.318	0.30	
	2100	21.2	100.0		4.105	0.87	
-8 +20M Sink	527.0	5.3	56.4	4.27	2.408	0.23	
Float	405.0	4.1	43.6	3.90	1.700	0.16	
	932.0	9.4	100.0		4.178	0.39	
-20 Mesh	1598			3.96		0.64	
Head (calc)	9933.0	100.0		4.10		4.10	

													GRINDING PRODUCT
Comb. Sink		56.5			4.21				2.38				
Comb. Float		27.5			3.93				1.08				
												MESH	%
												+10	
												+14	
												+20	
												+28	
												+35	
												+48	
												+65	
												+100	
												+150	
MACHINE												+200	
R.P.M.												+325	
pH												-325	
% SOLIDS													
TEMPERATURE													

REMARKS:

12,000 N

11,000 N

10,000 N

9,000 N

8,000 E

9,000 E

10,000 E

NO. 2 POSTS TEA 77,78
NO. 1 POSTS TEA 79,80

⊡ APPROX LOCATION

NO. 2 POSTS EMILY 3, 4

NO. 1 POSTS EMILY 1-4

NO. 2 POSTS EMILY 1, 2

PROPOSED INITIAL STRIPPING

PIT NO. 1

PIT NO. 2

DH NO. 1

DH NO. 2

DH NO. 3

DH NO. 4

DH NO. 5

DH NO. 6

DH NO. 7

DH NO. 8

⊡ APPROX LOCATION
NO. 2 POSTS TEA 79,80
NO. 1 POSTS TEA 81,82

DRILL HOLE MAP

TEA CLAIMS

YUKON TERRITORY, CANADA

SCALE 1" = 100'

BY A. WALLACE MITCHELL

SEPTEMBER 7, 1986

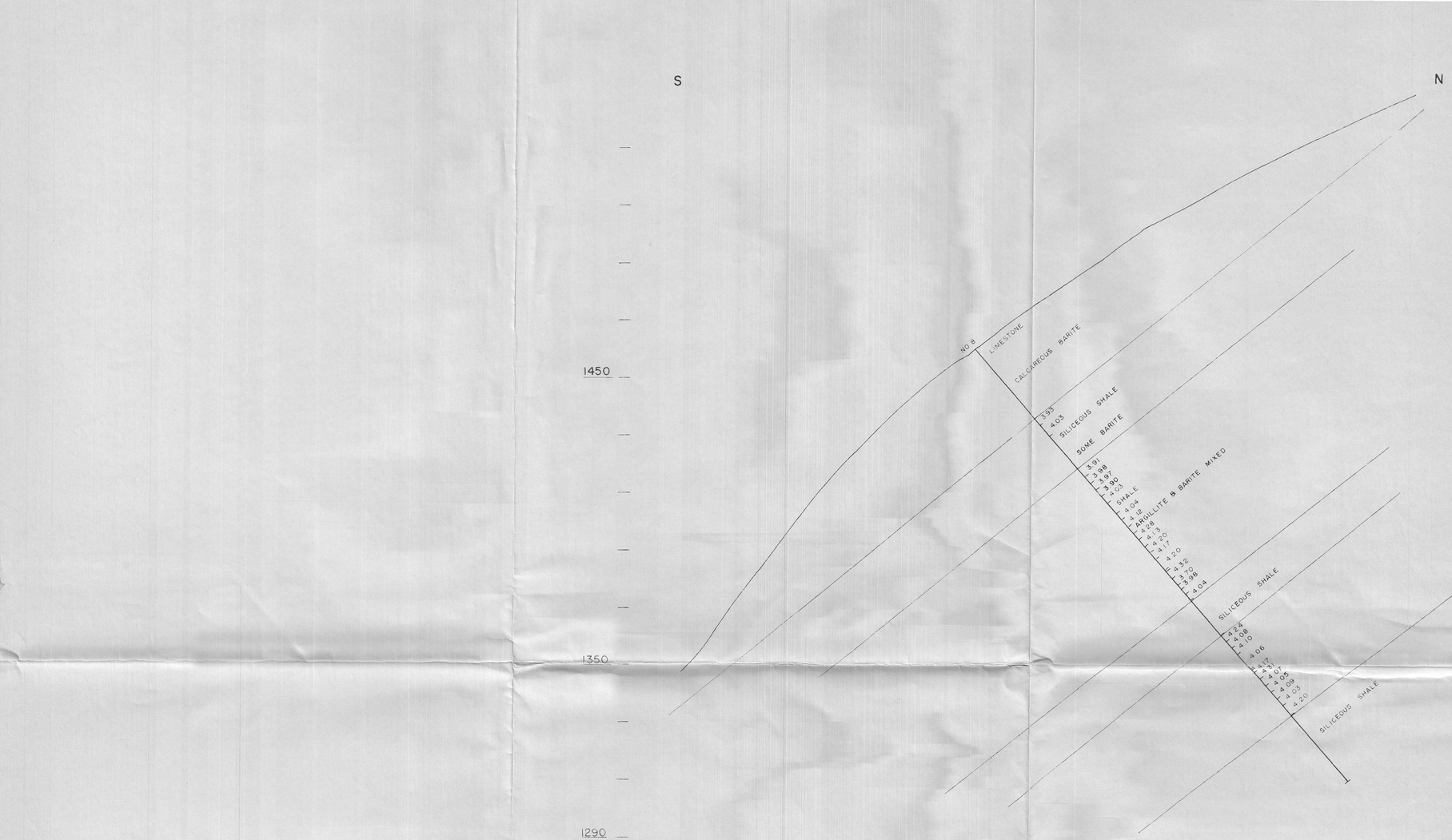
⊙ DRILL HOLE

·33 SURVEY POINT

□ CLAIM POST

S

N



ELEVATION 1450
1350
1290

SECTION 4

CROSS SECTION OF HOLE 8

TEA BARITE PROPERTY

YUKON TERRITORY CANADA

AUGUST 7, 1986

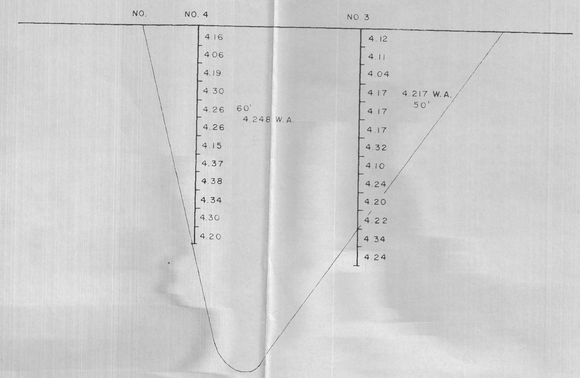
SCALE 1" = 20' VERTICAL AND HORIZONTAL

BY A. WALLACE MITCHELL

S

1300

1200



N

ELEVATION 1300

1200

SECTION 3

CROSS SECTION AT HOLES 3 AND 4

TEA BARITE PROPERTY

YUKON TERRITORY CANADA

AUGUST 7, 1986

SCALE 1"= 20' VERTICAL AND HORIZONTAL

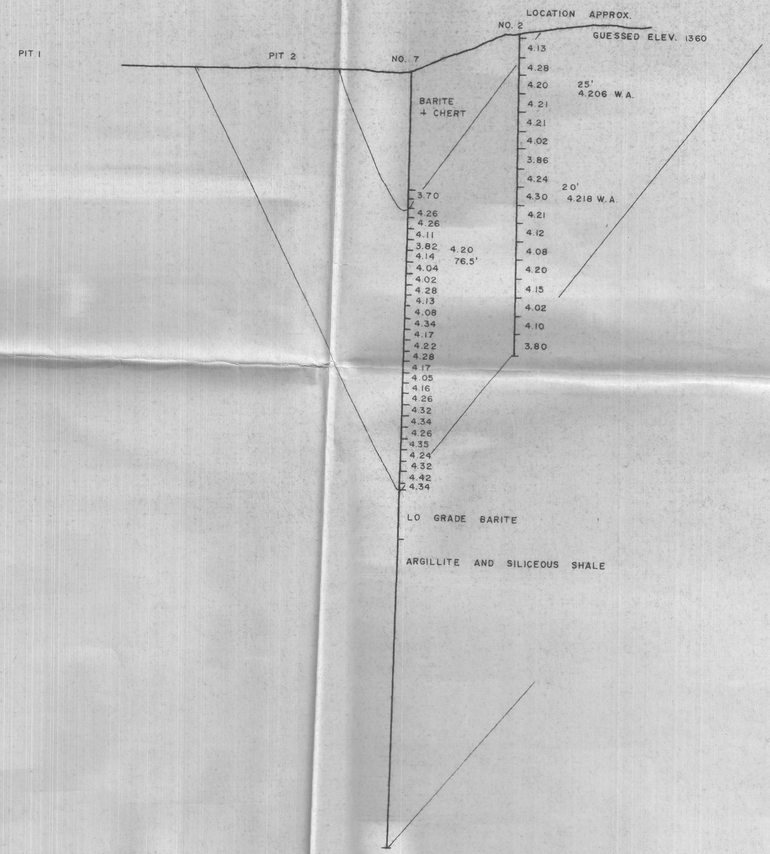
BY A. WALLACE MITCHELL

S

1355

1255

1155



N

ELEVATION 1355

1255

1155

SECTION 2

CROSS SECTION AT HOLES 2 AND 7
TEA BARITE PROPERTY
YUKON TERRITORY CANADA
AUGUST 7, 1986
SCALE 1"= 20' VERTICAL AND HORIZONTAL
BY A. WALLACE MITCHELL

S

N

ELEVATION 1460

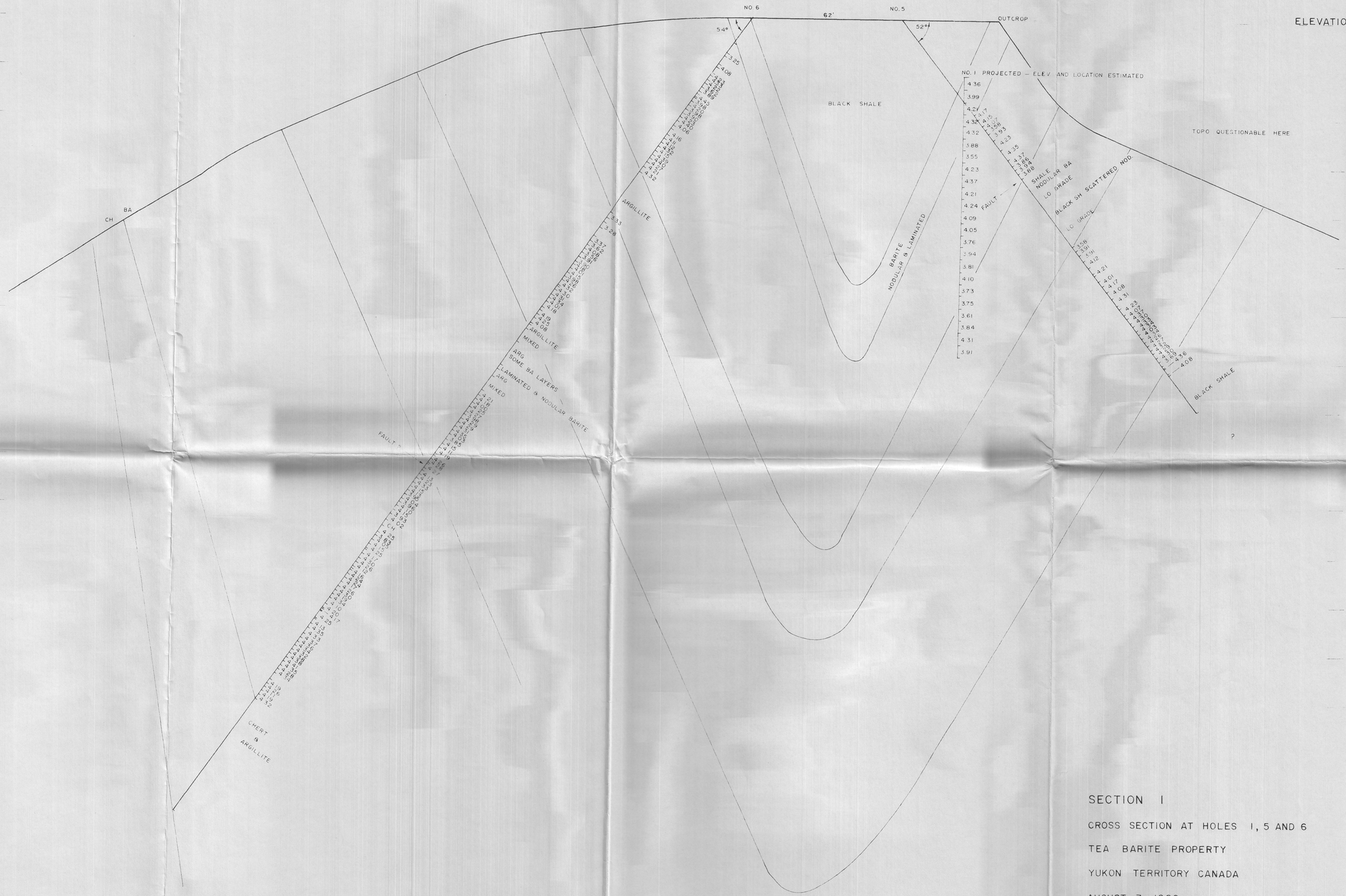
1460

1400

1300

1200

1180



SECTION 1

CROSS SECTION AT HOLES 1, 5 AND 6

TEA BARITE PROPERTY

YUKON TERRITORY CANADA

AUGUST 7, 1986

SCALE 1"= 20' VERTICAL AND HORIZONTAL

BY A. WALLACE MITCHELL

N

CCM #42
Fd D

TH #3

TH #4

TH #2

MKR 108, 1986
DH4

MKR 109, 1986
DH1

MKR 110, 1986
DH11

MKR 111, 1986
DH8

MKR 112, 1986
DH16

MKR 113, 1986

MKR 107, 1986
DH21

MKR 106, 1986

MKR 105, 1986
DH36

MKR 104, 1986

MKR 103, 1986

MKR 102, 1986

MKR 101, 1986

DH 2, DH 3, DH 6, D40, DH29, DH28, DH43, DH39, DH30, DH42, DH22, DH41, DH12, DH27, DH26, DH25, DH-13, DH19, DH20, DH14, DH, DH9, DH18, DH15, DH17, DH7, DH34, DH24, DH23, DH31, DH32, DH38A, DH33, DH38B, DH44, DH45, DH35, DH37

LEFT BANK KLONDIKE RIVER

YUKON RIVER

RIGHT BANK YUKON RIVER

SOUTH CHANNEL KLONDIKE RIVER

NORTH CHANNEL KLONDIKE RIVER

TAMMY # 1
DH5 P4322

LEROY # 1
P4321

AL # 1
P4423

COLUMBIA # 1
P4369

MARIETTE # 1
P4317

JEAN # 1
P4338

MARK # 1
P4368

MARK # 2
P4424

SHALOM
P29145

M.M.
CANADIAN
P13193

KRIS # 1
P28816

EB2
P22337

EB1
P22336

ROAD
(APPROX. LOCATION)

ROAD

Staked

Staked

Staked

TO DOME STATION DC-CS-3

LEGEND

approx. channel limits

1988 planned drill holes

SCALE 1: 2500
0 25 50 100 150 Metres

BERGLYNN RESOURCES INC.
VANCOUVER, B.C.

KLONDIKE CITY PROPERTY
DAWSON, Y.T.

PLAN SHOWING DRILL HOLE LOCATIONS

To accompany a report by:
ROBERTSON, WALLIS & ASSOCIATES

N.T.S.

Date:
February, 1988

FIGURE

12,000 N

11,000 N

10,000 N

9,000 N

8,000 E

9,000 E

10,000 E

NO. 2 POSTS TEA 77,78

NO. 1 POSTS TEA 79,80

⊡ APPROX LOCATION

SILICEOUS SHALE

NO. 2 POSTS EMILY 3, 4

Ba FLOAT

Ba LIMEY ZONES

SILICEOUS SHALE

Ba - NODULES

Ls & Ba FLOAT

SCREE COVERED AREA

DH NO. 5

DH NO. 6

DH NO. 8

PIT NO. 2

PIT NO. 1

NO. 1 POSTS EMILY 1-4

DH NO. 1

DH NO. 2

DH NO. 3

DH NO. 4

DH NO. 7

BLK Sh

Ba

Ls & Ba

CHERT

ARGILLITE

DIP SLOPE

⊡ APPROX LOCATION

NO. 2 POSTS TEA 79,80

NO. 1 POSTS TEA 81,82

NO. 2 POSTS EMILY 1,2

BLK Sh

WH Ba

GEOLOGY OF THE TEA CLAIMS

MAP SHEET 1050-2 YUKON TERRITORY, CANADA

SCALE 1"= 100' SURVEYED BY EDM

BY A. WALLACE MITCHELL

SEPTEMBER 7, 1986

ELEVATION OF A ASSUMED - COORDINATES ASSUMED

BASELINE BETWEEN A & B IS NORTH BY MAGNETIC COMPASS

ANTICLINE

SYNCLINE

⊡ CLAIM POST

·2 SURVEY CONTROL PT.

21 STRIKE AND DIP OF STRATA

Ba = BARITE

Ls = LIMESTONE

Sh = SHALE

THRUST FAULT

SAWTEETH ON UPPER PLATE