OBJECTIVE: Beginning about the middle of October, 1971, a Boyles Bros. Drilling Co. core drill unit and operator was moved onto the premises. The primary purpose was to confirm or disprove the reported Tungsten occurrences at certain locations in the tunnel. Secondly, if Tungsten mineralization was confirmed to be present, the economic values would be studied to determine the profitability of restoring the present mine workings to an operating status.

INTRODUCTION: DOMAIN MINERALS INC. headquartered in Fort Worth, Texas had acquired certain patented mining claims interests located approximately four miles north of the town of Silverton, Colorado on the SW flank of Storm Peak. Access is by good gravel road up Cement Creek and can be maintained year-round.

Prior to the drilling program, the Yukon Tunnel had very little oxygen content to the air, due to oxidation-reduction processes of the water percolation in a highly mineralized host rock formation. Consequently, physical work under the best conditions was greatly restricted even though blowers and six-inch air duct had been installed in the 1970-1971 season. With the compressor airline installed to operate the core drill and water
pump, no discomort or lack of oxygen was experiended during the drilling program.

Also prior to the drilling program operations, in September 1971, a geologic consulting firm, Chapman, Wood and Griswold of Albuquerque, New Mexico, was retained to do certain underground sampling and assaying. The results of their work found minor traces of Wolfram and Huebnerite at about the 4200-4300 ft. mark in a very thin quartz-pyrite vein. There were very good samples found in the previously mined portion of the designated #1 Tungsten vein at the 5580 ft. area. Other promising evidence found was the presence of Scheelite, or Calcium Tungstate (CaWO₄). This form of Tungsten comprises the majority of this metal produced in the United States today, but had never before been identified in the San Juan area.

UNDERGROUND GEOLOGY: The host rock in the area of this drilling program is predominatly a greenish altered andesite porphyritic mass, in general terms, altered volcanics of the Silverton series. Random areas are highly pyritic (Fe₂S), especially in area adjacent to the quartz-fluorite vein. The objective Tungsten bearing Vein (#1) averages about 6-7 feet in true width. Vein # 2 found during the late stages of the drilling program may average 6-12 feet in width. Vein # 2 may be the Uncle Sam vein. These veins are high-to-medium-temperature quartz-fluorite veins enriched by hydrothermal solutions, (and possibly some pneumatolytic processes), containing in various amounts Galena (PbS), Sphalerite (ZnS), Huebnerite (MnWO₄) and Wolframite (FeWO₄).
There are also some minor values in solver (Argentite) ($\text{Ag}_2\text{S}$) and copper associations in Chalcopyrite ($\text{CuFeS}_2$) and possibly in Covellite ($\text{CuS}$). Huebnerite, the major ore metal, is a tungstate of Manganese, chemically comprising 23.4% MnO and 76.6% WO$_3$, and occurs mostly in deep-seated fissure quartz veins. Its color is red-brown, of sub-metallic luster, has a hardness of 4 to 4.5, a gravity of 7 to 7.5, forming blades in radial clusters. Fluorite ($\text{CaF}_2$) and Scheelite ($\text{CaWO}_4$) also are present in minor amounts in the vein. Economic importance of Scheelite in the vein is yet to be determined, but should be considered recoverable.

The nature and volume of the Tungsten occurrences within the quartz-fluorite veins in the Yukon Tunnel is variable but not erratic. Based on the drilling program, the two orebodies found would be classified as partimensurate ore-bodies, or one where there is evidence to expect new ore-bodies or shoots will occur beyond presently defined limits.

The lateral width of the Huebnerite within the fissure veins varies from a minimum of a few inches to a maximum of four + feet (Hole #18). The Huebnerite-Wolframite type ore apparently is pure vein material as contrasted to a metasomatic replacement type orebody. As this classification of deposit is described in USGS Bulletin 182, Ramsome, 1902, the ore occurs in irregular stringers, branches, streaks and clusters of radial crystals. Metasomatism does occur however in the contact zone of veins with the host wall rock in varying degrees.

The vertical height, or back, to these veins as measured by drilling is at least 139 feet above the present tunnel level.
Highly significant is the fact that one of the two subject veins or branches thereof, is reported to outcrop on the surface at about 11,900 feet elevation directly above the Yukon Tunnel. Also Tungsten occurs in at least one other property on general strike with these veins at an elevation of about 12,500 feet. This does not necessarily prove vertical continuity of the same veins drilled, but this fact does have great importance in the degree and extent of Tungsten mineralization on this trend and in the local proximity of the Yukon Tunnel. Genetic studies of the fissure veins indicate extensive mineral communication vertically and longitudinally.

Vein #2, thought possibly to be the Uncle Sam vein, lies approximately 245 ft. westerly on nearly a parallel strike with the "Tungsten Vein". The main tunnel was driven through this vein at about Survey Station #211, or 5830 ft. from the portal. The drift then turns northerly and runs along the vein for about 570 feet. This explains the great amount of Huebnerite content in the dump. Vein #2 is better developed, is wider, and some 33 assays (from 1936 assay map) show minor associated values (sub-commercial so far) in silver, gold, copper, lead and zinc. This is in addition to the more consistent Huebnerite grade than evidenced in the "Tungsten Vein". The true vein width will vary between six to twelve feet. Vein No. 2 does appear to continue southerly, whereas on the northern end, it may split or divide, or be intersected with still another unidentified vein. At least, there is evidence to infer an indefinite linear and
vertical extension beyond the present drift. The dip on Vein
# 2 averages 85° westerly, as opposed to the calculated 77°
easterly dip on the "Tungsten Vein". (If these opposing dips
continue upward, this presupposes a juncture could possibly be
formed 500 to 800 feet above the Yukon Tunnel level. Future
underground exploration and development should take this
possibility under consideration to prove or disprove. Con­
sidering the structural and ore deposition processes involved
as discussed in USGS Bulletin 182, this idea is not a hazard
guess.)

RESULTS OF DRILLING: Twelve of the twenty holes drilled en­
countered Tungsten mineralization. The first group of holes,
Nos. 1, 2 and 3 were located to define the reported Tungsten
vein near the "fan station", which could not be seen in the
tunnel, due to oxidation products and dust coatings on the walls.
Unfortunately, this turned out to be a false lead, because the
cores showed only massive pyrites in the green andesite porphyry.
No vein material was encountered.

Hole # 4, however, began to show evidence of a pinchedout
vein or very thin stringers of quartzitic vein material. A
major gouge section or finely brecciated fault zone was en­
counerged at 180 to 204 feet. If any Tungsten were present,
it was not recovered in the cores, possibly being washed out
in the cuttings through the gouge zone in this locality associ­
ated with the hanging wall of the vein.

Hole # 5 was the first hole to contain the objective
Tungsten mineralization. It was placed as close as possible, known at the time, to encounter a southerly extension of the established Tungsten bearing vein previously mined at the 5580 foot station.

Hole #6 was placed 270 feet back toward Hole #4 to find the southerly limit or extension of the objective vein. At 172 to 178 feet, cores showed Tungsten mineralization to be present. Approximately 75 ft. of gouge was penetrated before reaching the vein however, and recoveries of gouge material were very poor (30% to 40% recovery). By correlation with the next southerly hole, #4, the competency of the vein diminishes to very thin stringers. The conclusion being that the southern extension or extremity of the possibly mineable vein had been found at that level, (10,000+ ft. elev.).

Hole #7 was placed between holes 5 and 6, but was drilled at 90° to the tunnel wall, and upward at an angle of 30°. This was to obtain some vertical control on the vein. Approximately 6 feet of the Tungsten Vein was recovered at a horizontally corrected distance of 233 to 239 feet, which supported the east dip of the vein at 77°, and measured 139 feet of back on the vein at that point.

Holes Nos. 8, 9, and 10 were drilled as a fan series at a plus 30° angle in order to cut the Tungsten Vein above the previously mined area as shown on the attached map. Consistently with previous cores of this vein, approximately six feet of mineralized vein was recovered in each of the three holes.
Holes Nos. 11 and 12 were placed to encounter the approximate longitudinal axis of the vein to gather more detail nature of the Tungsten deposition within the average six-foot vein. Likewise, Hole No. 13 was placed in the southern extremity of the developed drift, but the working space advantage was too cramped to cut the vein properly.

Of the thirteen diamond drill holes placed to obtain controls of the "Tungsten Vein", eight encountered tungsten mineralization, delineating at least 770 linear feet of productive vein continuity. Approximately one-third of this horizontal distance, (about 257 feet) is feasible and in keeping with good engineering practice, to project vertically above the tunnel level datum plant (+10,000 ft.) for calculation of inferred tonnages.

Seven core holes were drilled to delineate Vein No. 2, (except No. 17 which tried to establish northward continuity of the Tungsten Vein, but did not encounter the vein).

Holes 15, 18, 19 and 20 did penetrate the vein, and exceptional Tungsten values were obtained in the No. 15 and No. 18 cores. Cores have not been assayed on the No. 19 and 20 holes at the time of this writing.

The drilling program on Vein No. 2 furnishes some structural possibilities about the nature of the two Tungsten bearing veins, in the fact that there is a 17° to 25° angular difference in the strikes of the two veins. Even though there is definitely minable high-grade quantities of Tungsten ore in the 6200 foot and beyond station, there may be a system of veins
converging in the near proximity. More detail mapping is needed to accurately suggest this possibility, which would then be followed by underground development to prove or disprove.

CONCLUSIONS & RECOMMENDATIONS: The entire drilling program to date has been able to establish some minimum criteria to justify the necessary development and mine startup costs. Due to the fact that the veins are not a homogeneous grade, assays of cores in certain parts of the vein do not accurately reflect the actual values which would be obtained under actual mining conditions. Based on empirical knowledge of the Yukon Tunnel veins, a given volume of quartz vein material (depending upon first or second generation quartz) will probably contain a minimum of 0.6% to 2.0% WO$_3$, or more. Three percent ore is considered high-grade. Certainly in local oreshoot areas similar to the 6200 to 6400 foot station the ore content can go as high as 15% WO$_3$. Grading, analysis, and marketing of tungsten is based on the tungsten trioxide (WO$_3$) content and not on the metal content. For example, when pure, Huebnerite-Wolframite ores contain 67.3% WO$_3$, and Scheelite contains 80.6% WO$_3$.

A close approximation of the weighted volume and grade of ore bearing vein material is calculated as follows: (This is based only on the core drilling results, developed ore in sight and averaged assays).

VEIN NO. 1, 4800 to 5600 foot station:

770 linear feet x 257 vertical feet X 1 ft. avg. width = approx. 200,000 cu. ft. = approx. 23,500 tons avg. grade 8.5 cu. ft./ton 0.67% WO$_3$ = approximately 314,900 lbs. of WO$_3$ 15.965 tons
Vein No. 2, 5830 to 5980 foot station:

150 linear feet x 100 vertical feet x 1 ft. avg. width = approx. 15,000 cu. ft. = approx. 1765 tons avg. grade 8.5 cu. ft./ton

2.0% WO₃ = approximately 70,400 lbs. WO₃ / 2.0% = 3520 tons

Vein No. 2, Oreshoot Area, 6200 to 6375 foot station:

175 linear feet x 100 vertical feet x 4 ft. avg. width = approx. 70,000 cu. ft. = approx. 8235 tons avg. grade 8.5 cu. ft./ton

5.21% WO₃ (assay) = approximately 858,100 lbs. WO₃ / 5.21% = 162.7 tons

TOTAL = 1,243,400 lbs. WO₃

From previous metallurgical studies made on ores from the Adams property, which is very near but not quite identical with the Yukon Tunnel deposits, it was determined that poor recoveries were mostly due to overgrinding. Tungsten, being a friable, brittle material, much of the values were lost to tailings. A portion of these would be recoverable only by flotation methods. Therefore, the full economics of the Yukon ores are yet to be determined by metallurgical testing. This study should be done only by a qualified testing laboratory and a new mill flowsheet designed specifically for the Yukon Tunnel ores. Denver Equipment Company preferably, or Deltech, Inc. of Denver, Colorado is recommended for this study. The mill flowsheet as designed for the Adams Mine is inadequate for maximum efficient recoveries and a profitable operation on a sustained basis.
Mill construction and mine start-up cost estimates will not be included in this report, but rather will be discussed with the operating partner at the appropriate time.

In summary, the amount of exploration performed to date is very meager compared to the full economic potential of the claimed or owned area. Nevertheless there is sufficient economic value indicated to operate the property beginning on a limited basis. It is imperative that continuous exploration (core drilling, mapping and assaying) is carried on in conjunction with underground development and mining. If this is done, a much greater economic base will be realized by extending the present veins vertically and on trend with the presently defined veins.

Respectfully submitted,

ROYCE R. LATIMER

- 10 -