

Towell  
Asbestos

*Malheur Basin  
R. 10000  
Malheur  
Oregon*

PRELIMINARY REPORT  
TOWELL ASBESTOS PROPERTY  
MALHEUR COUNTY  
OREGON

JULY 23, 1957

J. M. SHARRATT  
S. V. TODD

INTRODUCTION:

From July 17 to 22, 1957, M. Sharratt and R. Todd examined the asbestos property of Mr. Paul Towell of Vale, Oregon.

During this time, a plane table survey was carried out on the prospect and detailed fibre counts made of the trenches. In addition, the area surrounding the original claim group was prospected in order to trace the extensions of ultrabasic intrusives.

Mr. & Mrs. Towell were, during the examination, most hospitable and their many kindnesses are acknowledged.

LOCATION AND ACCESS:

The four 20-acre unpatented lode claims of Mr. Towell are located in Malheur County, Oregon, about 1/2 mile west of the Baker-Malheur County line. No section corners are close to the claim group, so precise location is difficult. However, on the basis of aerial photographs, it appears that the claims lie in Section 7, Township 14S, Range 43 E. W. M. (See Property Ownership).

The property lies at an elevation of some 4,000 to 4,500 feet in an upland known as the Mormon Basin, and can be reached by improved dirt road from Huntington or Brogan, Oregon - the distances are 15 and 19 miles respectively. The travelling time from Huntington to the prospect is about 1/2 hour. Both Huntington and Brogan are on the Union Pacific Railroad.

Huntington is approximately 90 miles by paved highway N. W. of Boise, Idaho which is the nearest airline connection.

Portland, Oregon is some 400 miles by road N.W. of Huntington.

VEGETATION AND CLIMATE:

The southeastern part of Oregon is in general semi-arid and, in appearance, closely resembles parts of Arizona and Nevada. Vegetation consists mainly of low bush sage and, close to creek beds, a variety of tall weed grass and rushes. Above 5,000 feet elevation, there is some small pine and spruce growth but this is minor. Where the land has been irrigated, poplars and other varieties of hard wood are found.

The winter climate is moderate with temperatures rarely falling below  $-10^{\circ}\text{F}$  and generally being in the range of plus  $15^{\circ}\text{F}$  to plus  $35^{\circ}\text{F}$ . Snowfall is also light with some snow usually falling in February.

Summer temperatures are usually in the high 80's and, during the period of the examination in mid-July, the high temperature was  $95^{\circ}\text{F}$ . Humidity is low.

#### TOPOGRAPHY AND DRAINAGE:

The Mormon Basin area consists of gently rolling open country of moderate relief. Typical of an arid or semi-arid area, it shows many small winding, dry-wash stream beds. Prominent outcrops are framed by fan shaped talus slopes.

The area is bracketed by N.W. trending ridges which rise to 5,500 feet or more. The ridges are often capped by a flat-lying basalt flow or sill which forms a distinctive scarp face.

Drainage is to the southeast into the Snake River down an unnamed valley which exists near Huntington.

#### PREVIOUS WORK:

During the period November 24 - 26, 1956, M. W. Cox of the firm of Consulting Geologists of Wisser and Cox, examined the prospects at the request of Canadian Johns-Manville.

At the time, he had 4 trenches bulldozed in the area of the main showings. These trenches were still open at the time of the present examination, although somewhat obscured by loose cave.

With the exception of the above-mentioned, no other work has been done in the area.

REGIONAL GEOLOGY:

The area in question has never been mapped on a regional scale, nor are there any reports of the geology of the region.

The following brief description of the regional geology is from M. W. Cox's private report of November 28, 1956:

"The Mormon Basin area is a window of older (Paleozoic?) rocks in the general sequence of Tertiary Volcanics and clastics that make up most of the Snake River Basin. These older rocks comprise limestones, shales, greenstones and irregular bands of serpentized ultrabasics. Several such bands are known; they are typically discontinuous and seem to be a few miles long by as much as half a mile wide, generally aligned in a northwesterly direction.

"The upper parts of the present low hills in the immediate area are a recently exhumed pre-Tertiary erosion surface still containing patches of basalt flows".

The ultrabasic band on which Mr. Towell's four claims are located strikes W.N.W. and was traced 3,500 feet to the east and about 2,000 feet to the west - open at both ends. Some 1,500 feet to the west the band appears to have been cross-faulted west side north. An outcrop of argillite was found at this point and the continuation of the ultrabasics was found about 500 feet to the north. Outcrops of argillite are found some 3,000 feet to the south of the property and a steep basalt capped ridge rises to the north. At no point were the contacts limiting the ultrabasic band to the north or south observed.

REGIONAL GEOLOGY: (Cont'd)

Approximately 5 miles to the N.W. of the Towell asbestos claims is a chrome property, also owned by Mr. Towell and the ultrabasics may be continuous to this point. Some 45 miles W.N.W. of the asbestos prospect is Bates, Oregon, where Canadian Johns-Manville carried out a drilling program on asbestos showings in 1952.

Considerable hot springs activity over the general area of the claim group is evidenced by several zones of orange-black weathering sinter material.

### ECONOMIC GEOLOGY:

The ultrabasic band occurring on Mr. Towell's property comprises serpentized peridotite and dunite, not separated by any marked contact or structure. The peridotite is a medium-dark green, fairly coarse grained variety which weathers brown. The dunitic phase is less abundant and is recognized by its lighter green appearance containing little or no pyroxene. It is composed almost entirely of translucent green serpentine crystals and occasionally contains minute veinlets of magnetite. As has been mentioned, however, magnetite in the ultrabasic band is virtually absent.

Chrysotile asbestos fibre is found in both the peridotite and dunite, the main concentrations being located at Station A and immediately S.S.E. of Station E (See Map 3). In serpentine which has undergone no further alteration, the fibre is light-green in color. It is of a harsh, sometimes brittle, variety and, on flexing, proves to be of weak to medium strength. The veins in most cases contain partings of picrolite, often reducing unbroken fibre veins to numerous veinlets of 1/16" or less. The maximum unbroken length found was one vein at 3/8".

Later intrusive action and hot spring activity play a part in the subsequent alteration of the serpentine and fibre. The serpentine, where near the basaltic intrusives, is hard, light green in color, and contains abundant picrolite. It has all the appearance of a 'baked' contact rock. The fibre is here mainly replaced by picrolite. In the vicinity of Station E, there is an occurrence of sinter which probably is formed by the action of hot spring waters on the peridotite. The reddish-brown rock so formed still contains remnant fibre veins.



ECONOMIC GEOLOGY: (Cont'd)

Another effect attributed to the same activity is the alteration of pyroxene to a whitish green matrix of what are presumably bastite crystals.

The basalt dykes, of which two were observed on the property, are of a dark colored fine grained rock type with frequent quartz veinlets, and are probably associated with the distinctive sills which form the rim-rock or capping of many of the higher ridges in the vicinity. Strike is generally N-S.

Shearing is common, and is strongest in the lighter color or dunitic phase of the intrusive; it occurs mainly in two directions - either with a northeasterly or northwesterly strike and with steep dips.

Numbering the trenches 1 - 4 from west to east, the main fibre showings occur in Trenches #1 and #4 - Trench number 4 being beside the discovery outcrop. In Trench number 1 a vein count over 18' gave 1 @ 4, 3 @ 3/16, 7 @ 8, 9 @ 16, 4 @ 32, with a major part of the fibre contained in a block of massive serpentinized peridotite with a width of 4 feet. This fibre zone strikes N 30° E.

A vein count over 34 feet in Trench number 4 gave 1 @ 4, 5 @ 3/16, 6 @ 8, 6 @ 16, with the major part of the fibre contained in two 4' - 6' zones separated by 10' of low grade material. The fibre zones here strike N-S.

The fibre type was similar in all outcrops, varying only slightly in strength and grading to the W.E., off the property, to a light yellow picrolite.

With regard to the trenches, it should be noted that some caving and weathering has taken place since Cox's visit of November 1956.

ECONOMIC GEOLOGY: (Cont'd)

At that time more fibre may have been visible, although all trenches were shovelled and cleaned as much as possible during the present examination. It is believed that the main reason for the difference in the fibre counts taken by Cox and by the writer lies in the fact that most of the veins show partings which will reduce a 1/4" vein to 2 veins at 1/8", etc.

Some chromite was found to be present in float and in the talus debris which covers most of the property.

FACILITIES:

(a) Power:

Inquiry at the Huntington office of the Idaho Power Company reveals that the nearest power line to the Towell property is located some 10 miles straight line distance to the north at Rye Valley. It was reported that power is scarce at the present time but increased capacity from new damsites would be available in one to two years.

(b) Water:

Only one small stream, Butler Creek, lies close to the Towell property and the flow is such that it could provide only a minor amount of water - possibly sufficient for a limited drilling program.

One spring is known to occur at a farm close by and it is believed that considerable water supply could be developed in shallow wells.

(c) Shipping:

Huntington, Oregon, 15 miles by graded dirt road S.E. of the property, is a junction point of the Union Pacific Railroad, and is the closest shipping point.

*GEOLOGIC MAP OF TOWELL TRACT IN  
MAP FILE*

**Tosell Asbestos Property**

**Chrysotile**

NAME			OLD NAMES	PRINCIPAL ORE	MINOR MINERALS
<u>14S</u>	<u>43 E</u>	<u>7 (probably)</u>			
T	R	S			

PUBLISHED REFERENCES

MISCELLANEOUS RECORDS

**Malheur** ..... COUNTY

**Norman Basin** ..... AREA

**4000-4500** ..... ELEVATION

**About 15 miles** ..... ROAD OR HIGHWAY

..... DISTANCE TO SHIPPING POINT

PRESENT LEGAL OWNER (S) **Joe Anderson** .....

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Address **Ironside, Oregon** .....

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OPERATOR .....

Name of claims	Area	Pat.	Unpat.
<b>Tiger Eye</b>	<b>No 1-2-3 &amp; 4</b>		<b>X</b>

Name of claims	Area	Pat.	Unpat.

EQUIPMENT ON PROPERTY