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E. N. PENNEBAKER
CONSULTING GEOLOGIST
P. O. BOX 817
SCOTTSDALE, ARIZONA

March 8, 1958

Mr. G. M. Wiles
Manager, Mining Department
National Lead Company
New York 6, N. Y.

Dear Gloyd:

RE: Black Sands,
Southern Yavapai County,
Arizona

A few weeks ago two black sand deposits were brought to my attention through Howard Twitty and an attorney friend of his. I mentioned this to you in our long distance telephone conversation of February 7, and you orally authorized a very brief inspection. On March 5 I visited the ground in company with one of the owners. I believe that one of the areas may have some promise, but it would require an examination of a week or so in order to check a number of points.

The property consists of two blocks of ground about 12 miles apart, the two containing about 18 sections of land. Mining rights are held, so I am told, by 74 association placer claims of 160 acres, with J. R. Swift and seven members of his family as locators. Mr. Smith resides at 6241 North 47th Avenue, Glendale, Arizona.

These claims were located in September 1956, and, being placer claims, no location work was necessary. Assessment work on the 74 claims is not required until June 30, 1958, so these people have been able to sit on this large block of land for $1\frac{1}{2}$ years at little or no cost. Now they are faced with a substantial

expenditure for assessment work soon coming due.

Apparently Swift et al placed the property in the hands of Garpac, Inc., a Phoenix firm, to develop and sell. Five large-diameter holes were drilled in one of the areas and apparently some tests were run on the samples, but Swift has received very few of the results from such work. According to Swift, some attractive offers were received, but Garpac turned them down, seeking a still better deal. Swift says that Garpac has now been ousted and that the property is presently under the sole control of his family. He further advises that Kaiser Steel has showed interest in the property as a source of iron ore but has recently backed away, presumably because of the current business recession.

I can find out very little about this Garpac outfit. None of the associates listed on their letterhead appears in the 1957 list of engineers registered in Arizona. Obviously they did very little to explore and develop the ground, and my impression is that they were only trying to turn a quick, profitable deal without spending much money. In a short memo Garpac states that material cut by the five holes drilled was estimated to be between 3 and 5 percent of recoverable black concentrate that runs about 66% iron. A few analyses presented indicate that TiO_2 runs between 0.02 and 5.85%, but we do not know just what these analyses apply to.

The area of more promise is about 20 miles west of Congress Junction along Highway 93 in southernmost Yavapai County. The placer claims located here cover a part of T10N; R9W. The area is an alluviated flat filled with a medium-grained, lightly cemented

Suspect this should say 10N 8W

arkosic sand which appears to contain only a few erratic boulders. Toward the north, the edge of the basin is walled in by a cliff of white (sandy?) beds of Gila conglomerate (?) covered by a thin sheet of young basalt. Toward the east, low dark-colored hills appear, presumably made up of basic intrusives or metamorphics from which it is possible the black material is derived. Toward the south and west the basin slopes down toward distant hills.

The sandy deposits of interest are cut by Date Creek, an extended dry wash, and its tributaries, but the sand formation is apparently not severely eroded. This point, however, would require further checking. In section 4 there are cliff-like banks of the sand formation about 20 feet high that show numerous streaks of black sand. This is near the north edge of the basin, and churn drill hole No. 1 nearby is said to have cut 25 feet of "good" black material, beneath which it cut 25 feet of white, almost barren sand to its bottom at 50 feet. Churn drill holes 2, 3 and 4, farther south, are said to have been in material carrying black sand all the way to their bottoms at 50 feet. The writer observed the sludge piles remaining from the drilling of holes 2 and 3 and was able to pick up a fair amount of magnetite from them with a hand magnetite.

Hole No. 5 is located well to the west, on the west side of Highway 93, and is reported to be very low grade or barren. Thus the black sand content decreases westerly and away from the dark hills mentioned above.

My impression was that there is a large area, at least 15 square miles in extent, that carries magnetite-bearing sands of

substantial thickness. This has been tested well-away from the dark hills on the east, from which the black material may have been derived. I would expect a better concentration toward the east and nearer the hills. This point is worth checking, and there may be enough cliffed banks of washes to give some useful information. We should also want to find out whether Swift's claims go far enough east to cover this possibly more favorable area.

In the area drilled, most of the sludge piles can be re-sampled, and additional samples can be taken from the cut banks of washes. My impression is that from 3 to 5% of black sand concentrates appears reasonable and that an average thickness of 50 feet or more may be attained (hole No. 1 with a thickness of only 25 feet is near the north edge of the deposit).

The amount of TiO_2 present is problematical, and the analyses available tell us very little. About 25 miles to the north, and a few miles west of Bagdad, basic intrusives have been drilled and found to contain moderate amounts of ilmenite, but this particular occurrence is in another drainage basin. Nevertheless, there are ilmenite-bearing intrusives in this general region that could yield black sands with a TiO_2 content.

The second area controlled by Swift et al is near Congress Junction and is said to cover part of T9N; R6W plus 5 sections in the northwest corner of adjacent T9N; R5W. There is no drilling nor test-pitting whatever on this ground and only a few cut-banks along a wash were observed in the area visited. These banks were composed of a light-colored arkosic sand that yielded very little magnetite to the magnet.

Much of the above area is apparently built up of the outwash sands from the disintegration of granite in the vicinity of Yarnell, from which no abundant yield of magnetite would be expected. Judged from the few exposures available this is the case, and, in the absence of exploration to prove the presence of abundant black sands, this area does not appear to warrant any further attention.

If a sand with about 3% of black constituents, apparently consisting mostly of magnetite, is of interest, then the area on the west, along Date Creek, should receive some further examination. Please let me have your reaction at your convenience.

With best regards,

Yours sincerely

E. N. Pennebaker

ENP:mc

G. W. SHUTE
W. T. ELSING

LAW OFFICES
SHUTE & ELSING
TITLE & TRUST BUILDING
PHOENIX, ARIZONA

March 19, 1958

Mr. E. N. Pennebaker
23 East 1
Scottsdale, Arizona

Dear Mr. Pennebaker:

Mr. Johnnie Swift has contacted us wanting to know whether or not you have come to any decision in regard to his mining claims near Congress Junction.

We will be grateful if you will telephone us in regard to this.

Yours sincerely,

SHUTE & ELSING

By *W. T. Elsing*

WTE:dh

AL 3-2191

*Phoned Elsing on
Mar. 24 & advised that
interested. He said he
would pass word along
to Swift.*

*Phoned Mr. Elsing
3/20 P.M. - said
you were out
of town, etc.
McC.*

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With best regards,

Yours sincerely

E. N. Pennebaker

ENP:mc

Hole No 1

1st 25' good

2nd 25' NG

Near N edge of
basin ✓

Hole #1
600 - 700' NW

of Sec. Corner

54	↑	53
<hr/>		
59		510

Hole No. 2

500 a little E
of No. 1 - $\frac{1}{2}$ mile
apart

Good all the way

Hand magnet
doesn't pick up
much from
sludge pile

No. 5 - W. of Highway
NG all the
way

#3 & #4 said to
be about same
as #5

#3 is in center
wash

Property goes
Clear to black
Hills on E (± 2 mi)

Saw Hole #3


Magnet pulls
out about same
amt of iron as
from sludge
pile at #2

near Compres Jct

T9N
R6W

T9N
R5W

all of
this Twp



Sec 5, 6, 7, 8

18

$$\begin{array}{r|l} 31 & 32 \\ \hline 6 & 5 \end{array}$$

T 9 N

R 5 W

near HE

edge of
property

Leave here
at 8 AM

Wed. at 9 Noon
= Mar. 5

Leave at 9 P.M.

~~Swift~~
Pace ~~of~~

6241 No.

47th Ave

Bethany / Lorne

Turn West

off Black Canyon

J. R. Swift

YE 7-7446

Called at

7:15 from

Uth 5-6968

)

74 - 160 acre assoc-
placers

J.P. Swift Placer

YE 7-7446

Mail to 6241 No. 47th AVE. - GLENDALE
E

3-5% Fe

66% Fe & 2% Cu & 1% U₂

5 holes drilled @ 50'

36" diameter