PE-085-12

REPORT ON THE GOLD CENTER MINES, WILLOW CREEK DISTRICT

by

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Territorial Department of Mines

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History and Location

This property was formerly known as the Brooklyn Development Company and was later reorganized as the Kelly Gold Mines. Milo Kelly, locator and owner, contracted the sale of the property to the Gold Center Mines, Inc., in October, 1941. The principal stockholders of this company are H. I. O'Neill, Dr. Walkowski, Thomas Donahue and Robert Boyd, all of Anchorage. The property consists of five patented claims, one patented mill site and eight unpatented claims. The property is located at the upper left limit at the very head of Willow Creek and is adjacent to the Martin property now owned by the Alaska Pacific Consolidated on the southeast and is also adjacent to Alaska Pacific Consolidated claims on the north and east. This property is described by the USGS Bulletin 607 and was examined by J. Roehm of the Territorial Department of Mines in 1938, report of which is on file at the Territorial Department of Mines office at Juneau. The reader is referred to these for further information as general geology, equipment, etc.

Present Examination

The purpose of this present examination was to bring up to date available knowledge and to locate, if possible, the extension of ore on the lower levels. Considerable development has been done in the last several years. However, no extensive ore deposits have been found to date.

The Workings

There are numerous surface pits, cuts, and other workings indicating that numerous outcrops are present. No attempt was made to examine all of these, only a general picture was obtained. South of the upper level and approximately six hundred feet from it, at an elevation of 4210, a winze has been sunk on a vein dipping forty-eight degrees to the southwest and striking north 53 west. This winze was examined and found to contain a three inch vein

in rather soft and highly faulted quartz diorite. A plan and section are included herewith. There is much movement on the plane of the vein and the diorite is heavily stained with iron oxide. West of this winze, at an elevation of 4250, is a forty-five foot drift, the last twenty feet of which are in solid quartz diorite. No vein was visible here. However, some quartz was on the dump and, judging from the bearing of the drift, the strike of the vein must have been about north 40 west.

The Upper Level The upper level, at an elevation of 4140, has produced all the ore mined to date. This consists of a sixty foot crosscut bearing almost due east and intersecting a fracture zone of about fifteen feet wide. The vein throughout these workings was dispersed along movement of the hanging wall and foot wall. The ground, through this fracture zone, is generally very soft. In the drift (see map enclosed) eastward the vein strikes about south 15 east and dips at an average about 43 degrees to the west. The vein has been underhand stoped along 35 feet and 15 feet below the floor, and was reported to have excellent values. There is still some quartz remaining at the bottom of this winze. Above this a raise was driven along the ore and a stope was mined out. The vein in the stope was reported to have reached maximum thickness of about 24 inches. However, there was much lensing and doubling over of the vein, as numerous faults in the plane of the vein caused duplication. The stope is in soft ground and all vein matter in the stope was cut by a straight fault coming out of the foot wall. This fault is exposed in the drift near station 204 and has an approximate strike of the vein and dips from 76 to 56 degrees to the east. The total production from this level is estimated at about twenty thousand dollars.

The Lower Level The lower level, an elevation of 3793 feet, consists of a crosscut 345 feet long and drifts driven off this along various frac ture zones. This drift bears about south 80 east and was driven in the hope of intersecting the upper veins at this level. Throughout its length the rock is very hard quartz diorite. At about 125 feet in, a small vein about fan inch in thickness and striking north 35 west and dipping 37 degrees to the west, was intersected. This was reported to have good values but owing to its small width only a little work has been done on it. At 110 feet from station 101, a strong fracture zone striking about north 20 west and dipping about 46 degrees to the west was intersected. This

fracture zone is about four feet wide and has approximately 12 inches of heavy gouge along the hanging wall. Some ground-up quartz was reported to have been in this gouge and must have been the incentive for driving this tunnel. No vein was hit and work was discontinued. Later the crosscut was continued and at two hundred feet from station 101, a fault striking about north or east and dipping 66 degrees to the west, was struck. Eighty two feet from station 102 a strong fracture zone striking about north 15 west and dipping about 45 degrees west was reached. It was apparently thought that this was the downward extension of the upper workings. This fracture system is very persistent and in places has a little quartz that is reported to be of low grade. The quartz seen along this fracture system was at those places where small faults horsetailed from the main zone of movement. This is especially true around station 104 where a raise was driven for about thirty feet in the hope of finding a thicker vein.

General Suggestions It is quite apparent that the lower level is not on the same vein zone as the upper workings, as the projection of the upper vein at the level of the lower tunnel is about 315 feet to the east. It can, therefore, be assumed that a vein close to the eastern-most tram tower on the surface and prospected by numerous pits, is on the same vein zone as this main drift. A suggested method for prospecting this area would be to continue the crosscut from station 103 and at about the same bearing until the vein zone was intersected, or diamond-drill from any position eastward from the drift. The character of the ground would be the criterion of the ore to be expected, as very dense and hard rock rarely produces any ore. This has been proved on the upper level as numerous faults on the plane of the vein in relatively broken ground produced a sizeable ore body. Careful consideration should be given to both hanging wall and foot wall of vein zones and especially on the other side of slickensides of zoning on the plane of the vein. Many ore deposits have been found by accidntally blasting too hard and revealing veins along the opposite sides of these fault planes.

KELLY

Elevations

4050'	3730	Mill	3640 + [illegible]	= 3730
3960	4230	L. Bell	3700 + 90	= 3790
0090	3790	Bridge		= 4050
4050	4050	R.R. Xing	3975 + 90	= 4065
[illegible]	4065	Open R.	4140 + 90	= 4230
[illegible]				
3960				
0090				

Bearings

Millsite 4	Millsite -1 / 100	216° 16½ / 180 / 36° 16½' / 216 16½	S 37° 37' E / 36° 16½ / S 1° 20½' E
100	Millsite 4 / 101	179° 60 / 121 53 / 58° 07 / 179 60	S 1° 20½ E / 58° 07 / S 59° 27½ E
101	100 / 102	179° 60' / 164 49½ / 15° 10½ / 179 60	S 59° 27½ E / 15° 10½ / S 74° 38' E
102	101 / 103	179° 60 / 177° 33 / 2° 27' / 179° 60	S 74° 38' E / 2° 27' E / 76 65 / S 77° 05' E
Back → Millsite 4	TP-2 / 100	179° 60' / 113 19 / 66 41 ; 246° 41 / 180 / 66 41 ; 179 60 / 113 09 / 66 51	66 51 / N 1° 20½' W / N 65 30½ E / S 65 30½ W.
TP-2	TP-1 / Millsite 4	179 60 / 150 26½ / 29 33½ / 179 60	N 65 30½ E / 29 33½ / 94 64 / S 84 56 E / N 84 56 W ; 179° 60' / 95 04 / 84 56
TP-1	Book I / TP-2	179 60 / 168 20 / 11 40	84 56 E / 11 40 / S 73° 16 E / N 73° 16 W.

Book 1	200 179° 60 TP-1 131 42 48 18	S 73 16 E 48 18 S 24 58 E N 24 58 W
200	201 Book 1 249° 11 180 69° 11	S 24° 58 E 179 60 69° 11 94 09 93 69 N 85° 51' E 94 09 S 85° 51' W
		M 35 M. 89 M 37 T 86 CHECK
200 → B.1	249° 11 180 69° 11	S 85° 51' W 69° 11 179 60 154 62 155 02 155 02 N 67° 58' W
B.1 → TP 1	179° 60 131 42 48 18 179 60	N 24° 58' W 48 18 72 76 N 73° 16' W
TP 1 → TP 2	179° 60 168 20 11 40	N 73° 16' W 11 40 N 84° 56' W
TP 2 → M.4	179° 60 150 26½ 29 33½	84° 56 29 33½ 179 60 113 89½ 114 29½ 114 29½ S 65° 30½ W
M.4 → 100	179 60 113 09 66 51	66 51 S 65° 30½ W S 1° 20½' E
100 → 101	179° 60 121 52 58 08	S 1° 20½' E 58 08 S 59° 27½' E
101 → 102	179° 60 164 49½ 15 10½	S 59° 27½' E 15 10½ S 74° 38' E
102 → 103	179° 60 177 33 2 27	S 74° 38' E 2 27 76 65 S 77° 05' E

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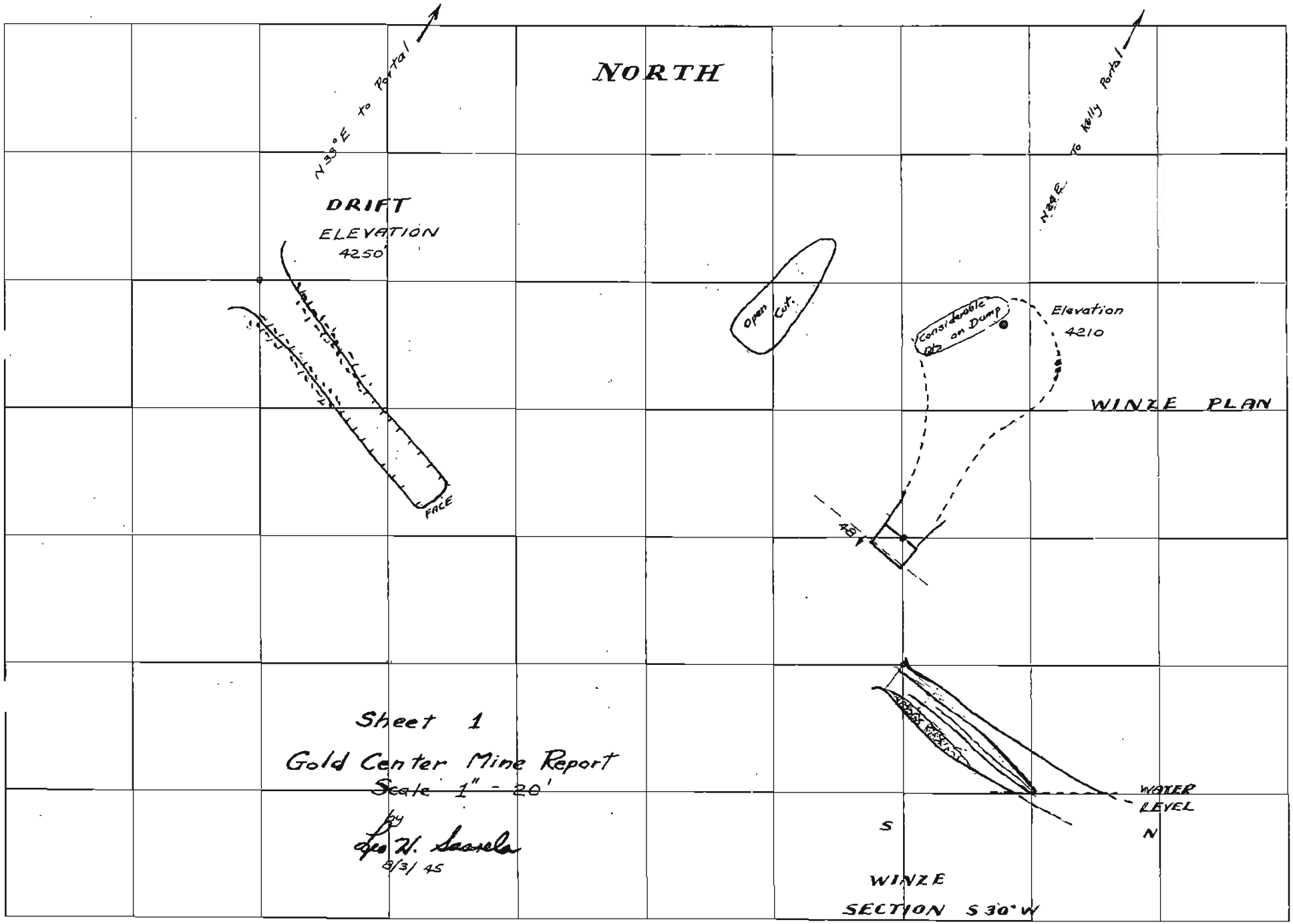
Course	Dis	Hor. Dis	Ver. Dis	C. Lat.	C. Dep.	Area	T. Lat.	T. Dep.	T. Elevation	
							0.0	1127.92	4235	Assumed Elev @ - 200
N 29° 58' W	789.05	- 6° 43' 789.50	3.56 93.42 −96.98	+ 710.28	− 330.70		710.28	797.22	4135.02	BROOK - 1
N 75° 16' W	115.95	- 0° 13' 115.94	+ 1.73 − 0.60 +1.13	+ 32.30	− 109.11		743.08	688.11	4134.15	TP - 1
N 84° 56' W	.71 408.60 409.31	- 31° 58' 349.04	−216.70' +1.35 − 215.35	+ 30.66	− 345.88		773.74	342.23	3918.80	TP - 2
S 65° 30½' W	.93 402.70 403.63	- 21° 17' 376.10	2.58 − 140.51 − 143.93	− 155.96	− 342.23		617.78	0.0	3774.87	MILL - 4
S 1° 20½' E	245.30	+ 3° 13' 244.90	3.08 1.79 13.83 +18.70	− 244.89	+ 1.42		372.89	1.42	3793.57	100
S 59° 27½' E	43.85	— 43.85	+ 0.21	− 22.28	+ 37.76		350.61	39.18	3793.78	101
S 74° 38' E	217.00	— 217.00	+ 1.14	− 57.50	+ 209.24		293.11	248.42	3794.92	102
S 77° 05' E	85.18	— 85.18	+ 1.32	− 19.04	+ 83.02		274.07	331.44	3796.24	103



Sheet 1

Gold Center Mine Report

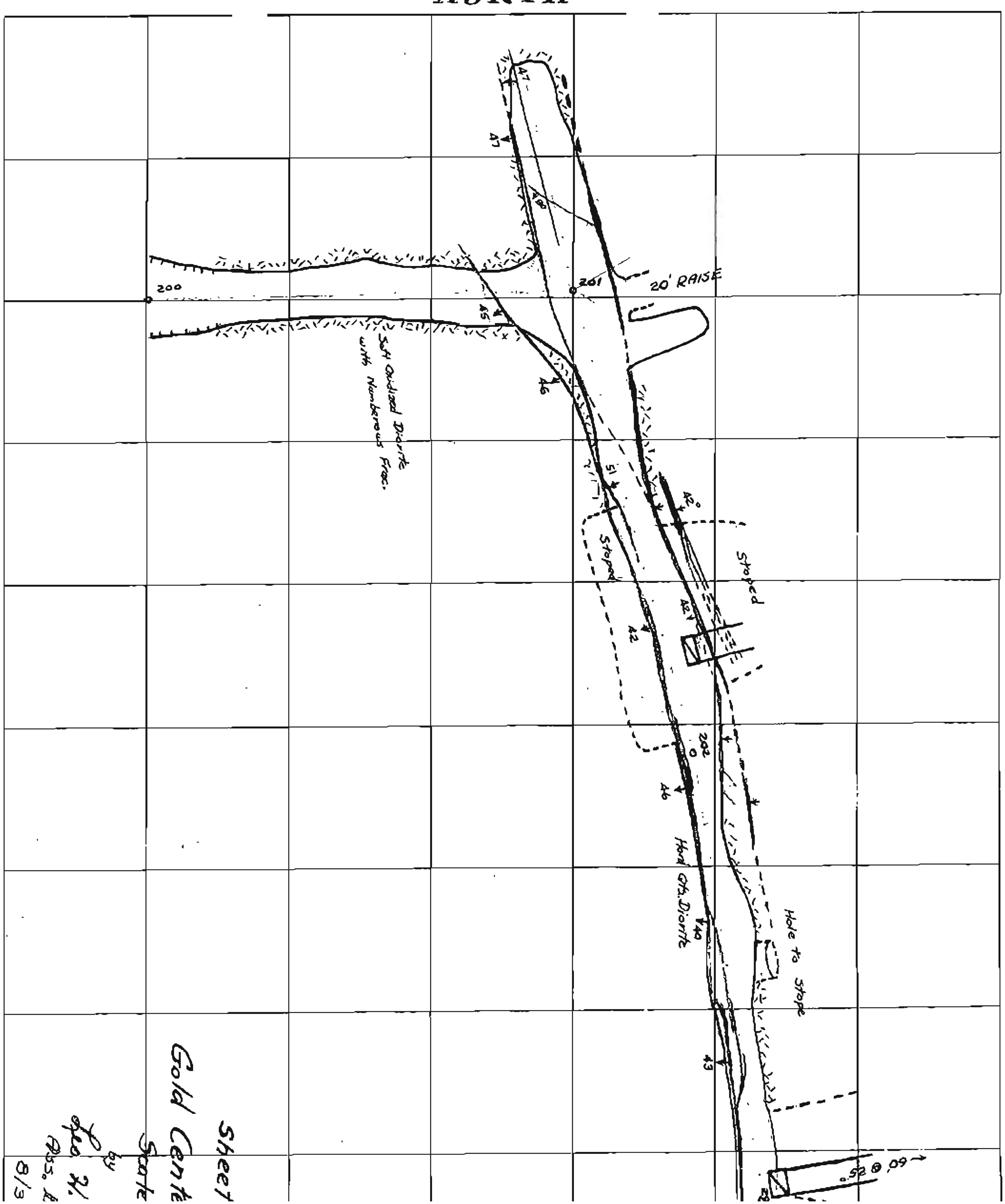
Scale 1" = 20'

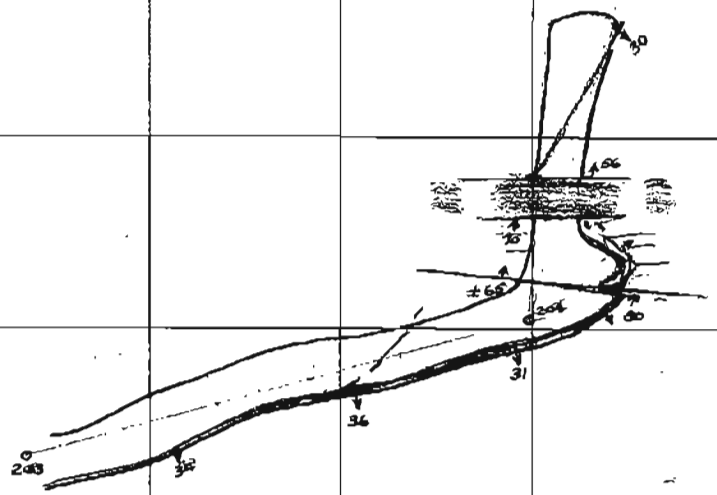
by

Geo N. Searels

8/3/45

NORTH


200
201
20' RAISE
Soft Oxidized Diorite with Numerous Frac.
Stoped
Stoped
Hard Qtz. Diorite
Hole to Stope
202



Sheet 3

Gold Center Mine Report

Scale 1" = 20'

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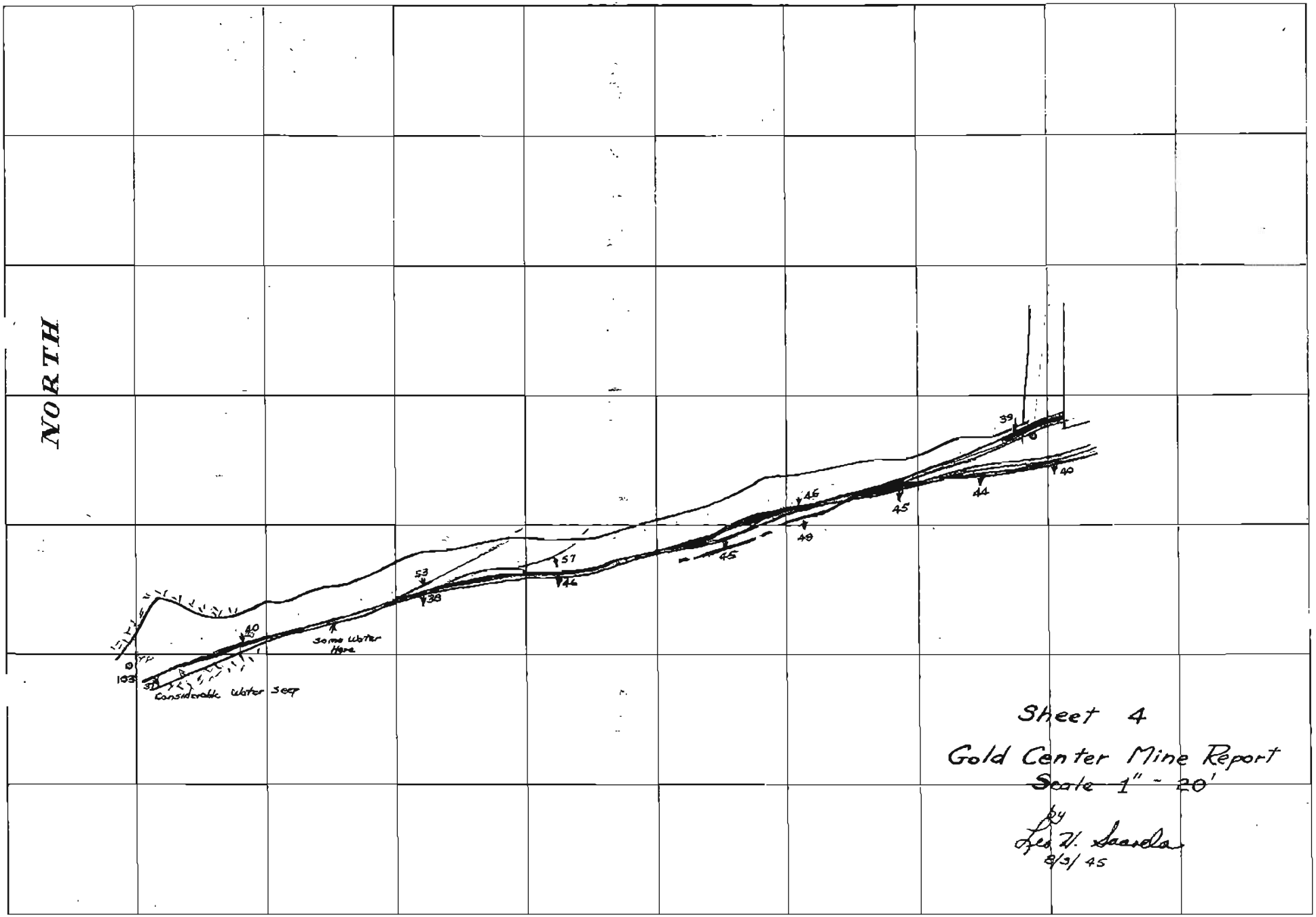

Sheet 4

Gold Center Mine Report

Scale 1" - 20'

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