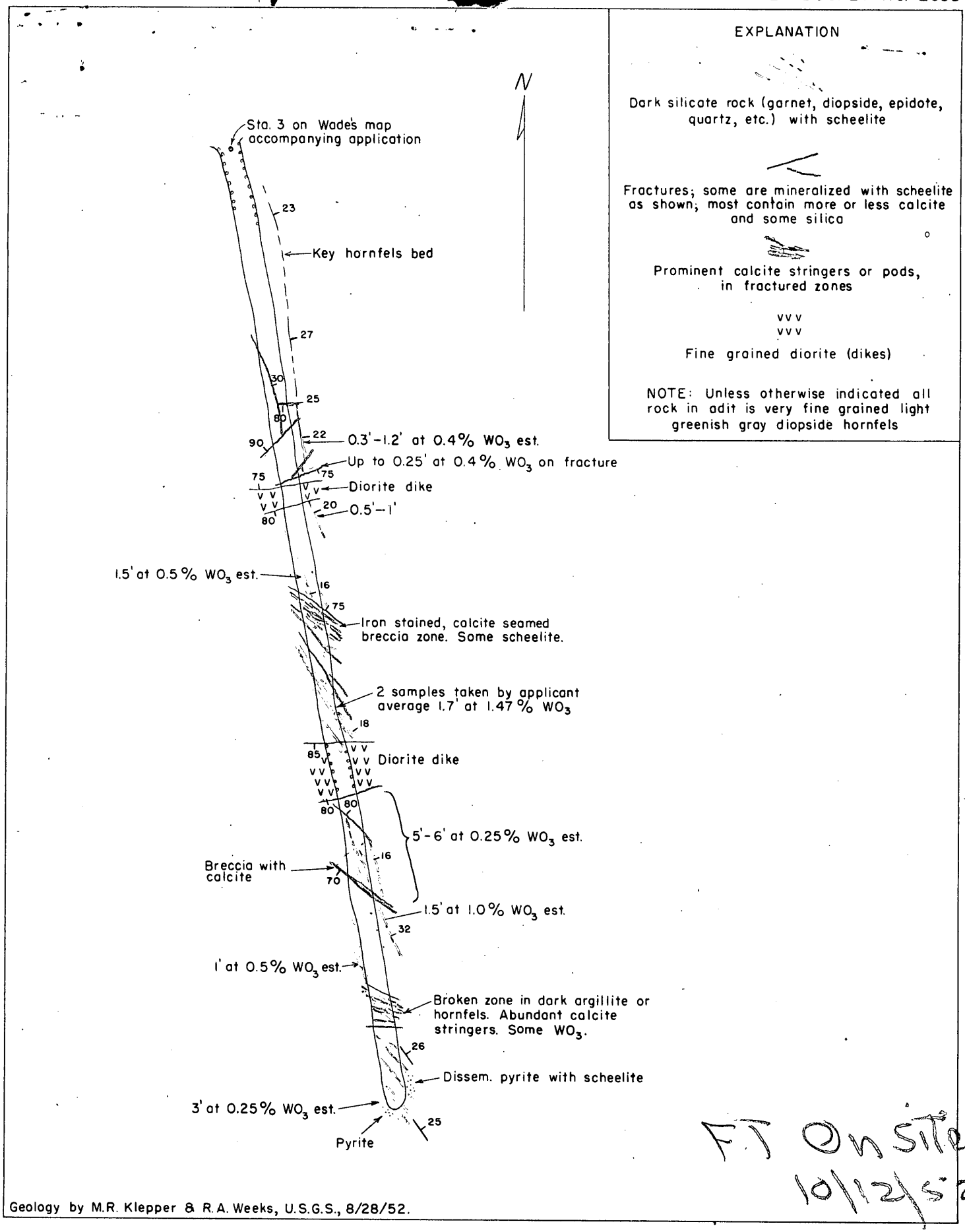
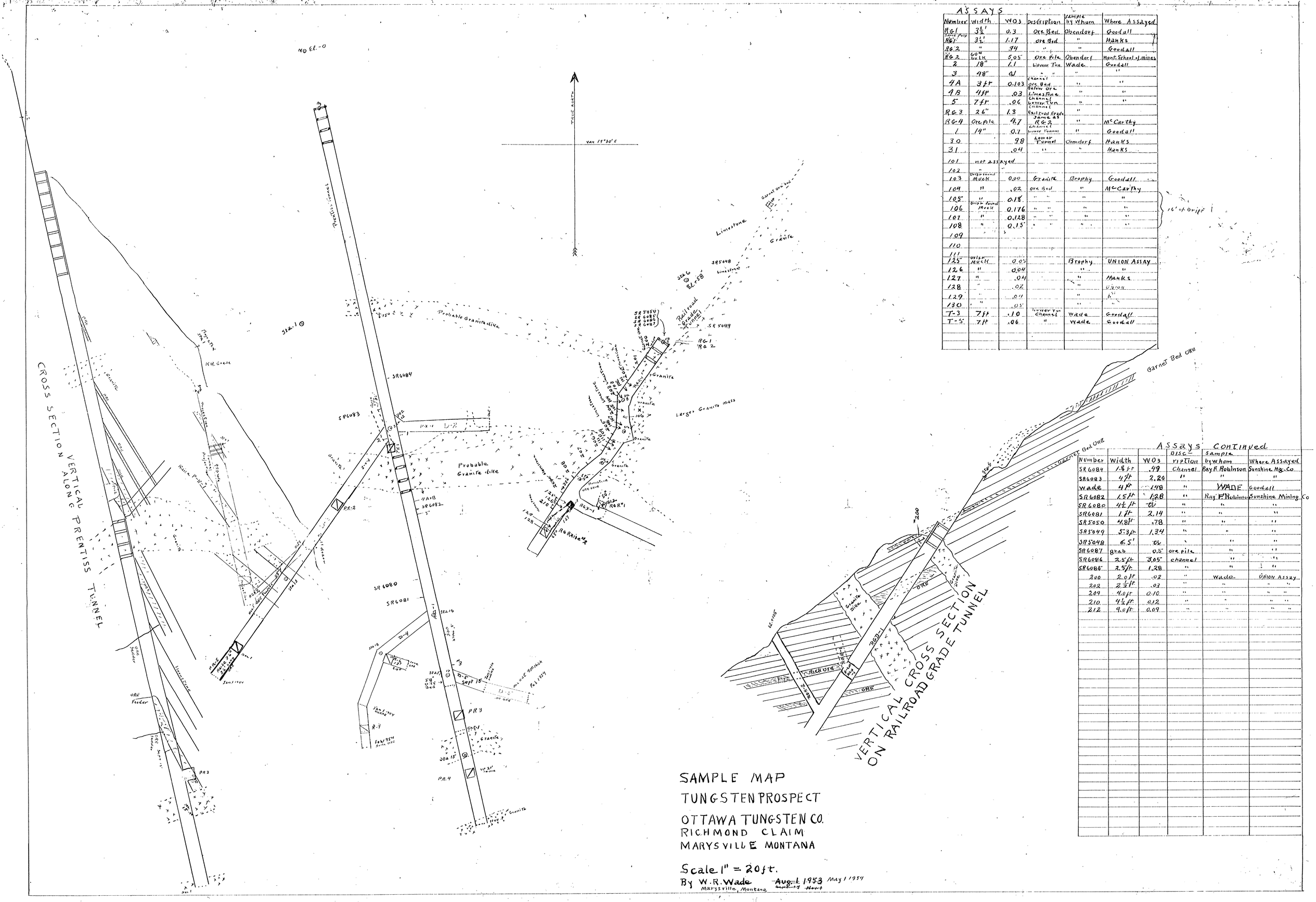


Geology by M.R. Klepper & R.A. Weeks, U.S.G.S., 8/28/52.

FT On site 10/12/52

GEOLOGY OF ADIT ON RICHMOND CLAIM, PRENTICE PROPERTY MARYSVILLE DIST., LEWIS & CLARK COUNTY, MONTANA



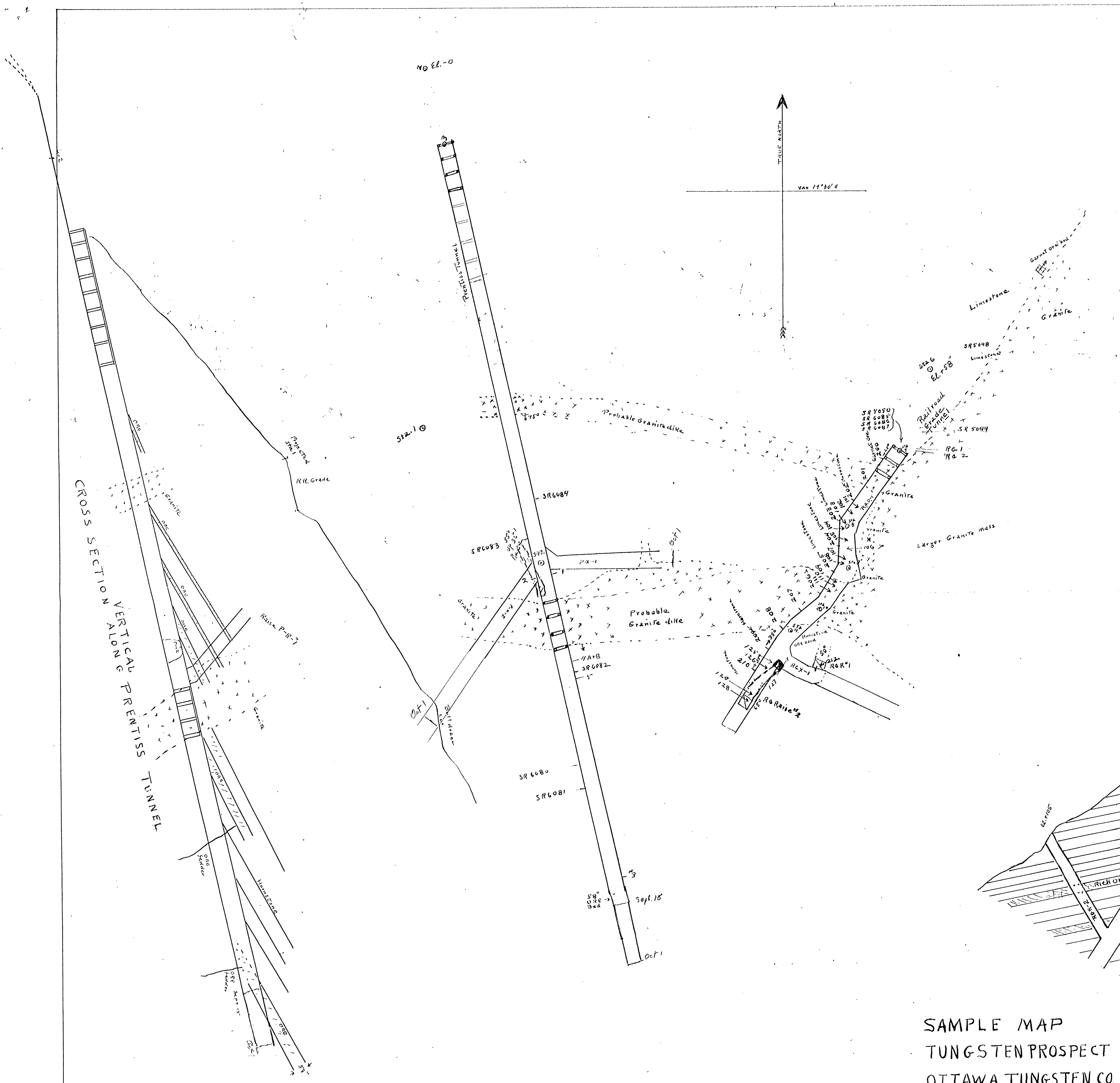
ASSAYS

Number	Width	WO3	Description	Sample by whom	Where Assayed
RG1 Same Pulp	3½'	0.3	Ore Bed	Obendorf	Goodall
RG1'	3½'	1.17	Ore Bed	"	Hanks
RG2	"	.94	"	"	Goodall
RG2	Gon Bulk	5.05	Ore Pile	Obendorf	Mont. School of Mines
2	18"	1.1	Lower Tun	Wade	Goodall
3	48"	~	" "	"	"
4A	3 ft	0.103	Channel Ore Bed Below Ore	"	"
4B	4 ft	.03	Limestone	"	"
5	7 ft	.06	Channel Lower Tun	"	"
RG3	26"	1.3	Channel Railroad Grade Same as	"	
RG4	Ore Pile	4.7	RG2	"	McCarthy
1	14"	0.7	Channel Lower Tunnel	"	Goodall
30		.98	Lower Tunnel	Obendorf	Hanks
31		.04	"	"	Hanks
101	not assayed				
102	"				
103	Drift round Muck	0.00	Granite	Brophy	Goodall
104	"	.02	Ore Bed	"	McCarthy
105	"	0.18	" "	"	"
106	Drift round Muck	0.176	" "	"	"
107	"	0.128	" "	"	"
108	"	0.15	" "	"	"
109					
110					
111					
125	Drift Muck	0.05		Brophy	UNION ASSAY
126	"	0.04		"	"
127	"	.04		"	Hanks
128	"	.02		"	UNION
129	"	.01		"	"
130	"	.05		"	"
T-3	7 ft	.10	Lower Tun Channel	Wade	Goodall
T-5	7 ft	.06	"	Wade	Goodall

16' of Drift

Assays Continued

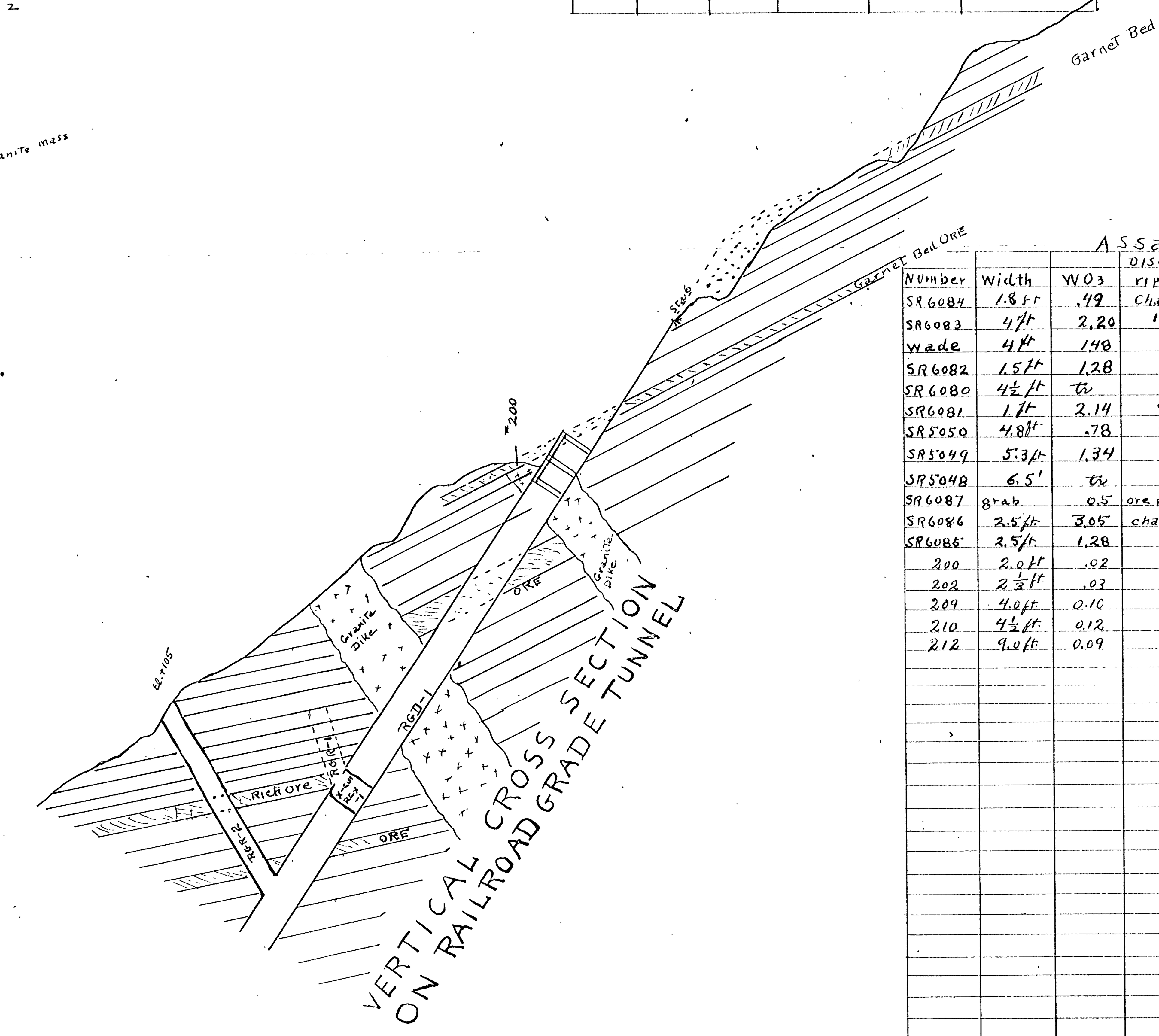
Number	Width	WO3	Description	Sample by whom	Where Assayed
SR6084	1.8 ft	.49	Channel	Ray F. Robinson	Sunshine Mg. Co
SR6083	4 ft	2.20	"	"	"
Wade	4 ft	1.48	"	WADE	Goodall
SR6082	1.5 ft	1.28	"	Ray F. Robinson	Sunshine Mining Co
SR6080	4½ ft	~	"	"	"
SR6081	1 ft	2.14	"	"	"
SR5050	4.8 ft	.78	"	"	"
SR5049	5.3 ft	1.34	"	"	"
SR5048	6.5'	~		"	"
SR6087	Grab	0.5	Ore pile	"	"
SR6086	2.5 ft	3.05	Channel	"	"
SR6085	2.5 ft	1.28	"	"	"
200	2.0 ft	.02	"	Wade	UNION ASSAY
202	2½ ft	.03	"	"	" "
209	4.0 ft	0.10	"	"	" "
210	4½ ft	0.12	"	"	" "
212	9.0 ft	0.09	"	"	" "



ASSAYS

Number	Width	WO3	Description	Sample by Whom	Where Assayed
RG1	3½'	0.3	Ore Bed	Obendorf	Goodall
RG1 (Same pulp)	3½'	1.17	Ore Bed	"	Hanks
RG2	"	.94	"	"	Goodall
RG2	60# bulk	5.05	Ore pile	Obendorf	Mont. School of Mines
2	18"	1.1	Lower Tun	Wade	Goodall
3	48"	[illegible]	" "	"	"
4A	3 ft	0.103	Channel ore Bed	"	"
4B	4 ft	.03	Below ore Limestone	"	"
5	7 ft	.06	Channel Lower Tun	"	"
RG3	26"	1.3	Channel Railroad Grade	"	
RG4	Ore pile	4.7	Same as RG2	"	McCarthy
1	14"	0.7	Channel Lower Tunnel	"	Goodall
30		.98	Lower Tunnel	Obendorf	Hanks
31		.04	"	"	Hanks
101	not assayed				
102	"				
103	Drift round muck	0.00	Granite	Brophy	Goodall
104	"	.02	Ore Bed	"	McCarthy
105	"	0.18	" "	"	"
106	Drift round muck	0.176	" "	"	"
107	"	0.128	" "	"	"
108	"	0.15	" "	"	"
109					
110					
111					
125	Drift muck	0.05		Brophy	UNION Assay
126	"	0.04		"	"
127	"	.04		"	Hanks
128	"	.02		"	Union
129	"	.04		"	"
130	"	.05		"	"
T-3	7 ft	.10	Lower Tun Channel	Wade	Goodall
T-5	7 ft	.06	"	Wade	Goodall

16' of Drift (samples 105–108)



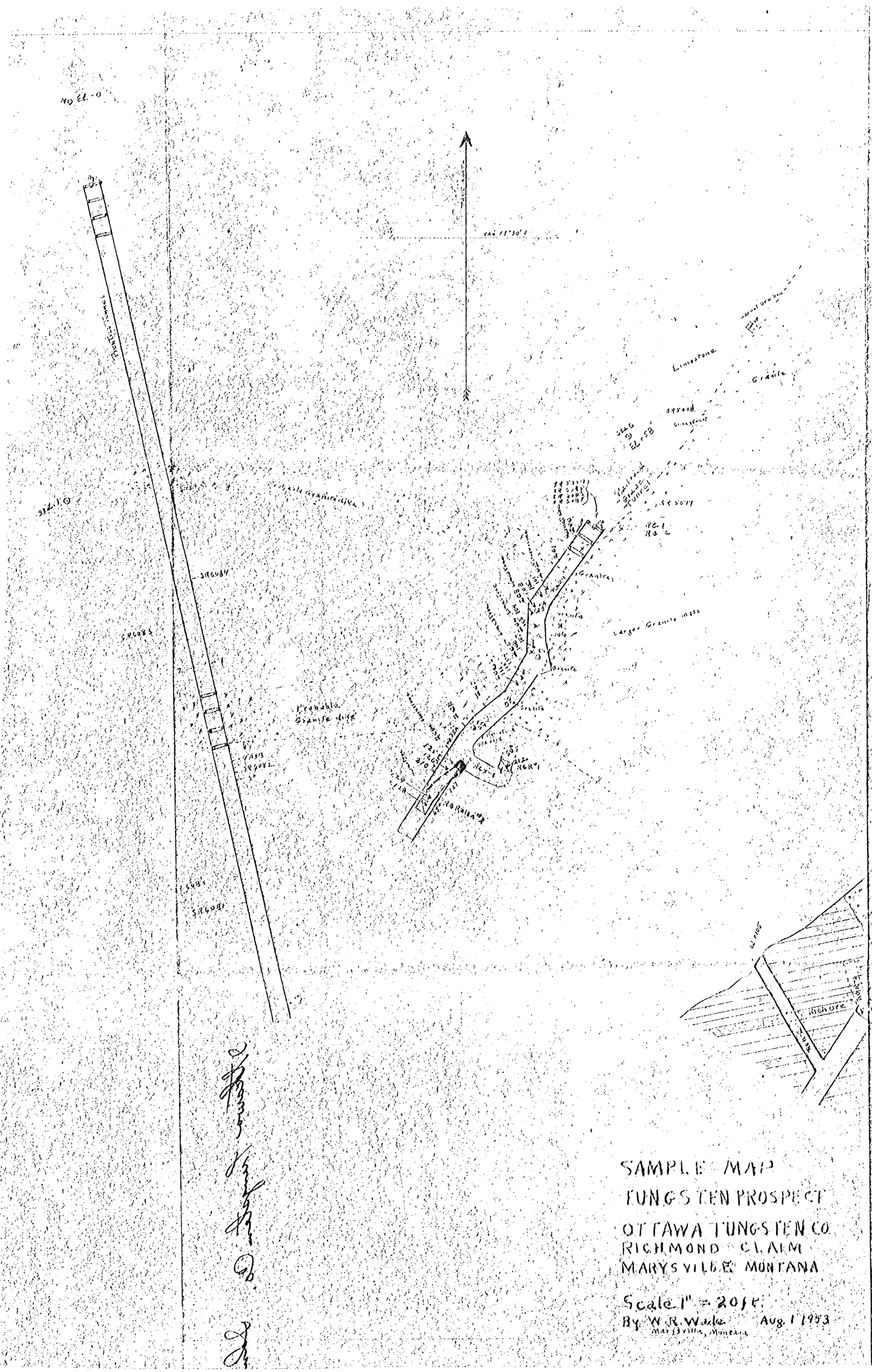
ASSAYS CONTINUED

Number	Width	WO3	Discription	Sample by whom	Where Assayed
SR6084	1.8 ft	.49	Channel	Ray F. Robinson	Sunshine Mg. Co.
SR6083	4 ft	2.20	"	"	"
Wade	4 ft	1.48	"	WADE	Goodall
SR6082	1.5 ft	1.28	"	Ray F. Robinson	Sunshine Mining Co
SR6080	4½ ft	tr	"	"	"
SR6081	1 ft	2.14	"	"	"
SR5050	4.8 ft	.78	"	"	"
SR5049	5.3 ft	1.34	"	"	"
SR5048	6.5'	tr	"	"	"
SR6087	grab	0.5	ore pile	"	"
SR6086	2.5 ft	3.05	channel	"	"
SR6085	2.5 ft	1.28	"	"	"
200	2.0 ft	.02	"	Wade	UNION Assay
202	2⅓ ft	.03	"	"	" "
209	4.0 ft	0.10	"	"	" "
210	4½ ft	0.12	"	"	" "
212	9.0 ft	0.09	"	"	" "

SAMPLE MAP
TUNGSTEN PROSPECT
OTTAWA TUNGSTEN CO.
RICHMOND CLAIM
MARYSVILLE MONTANA

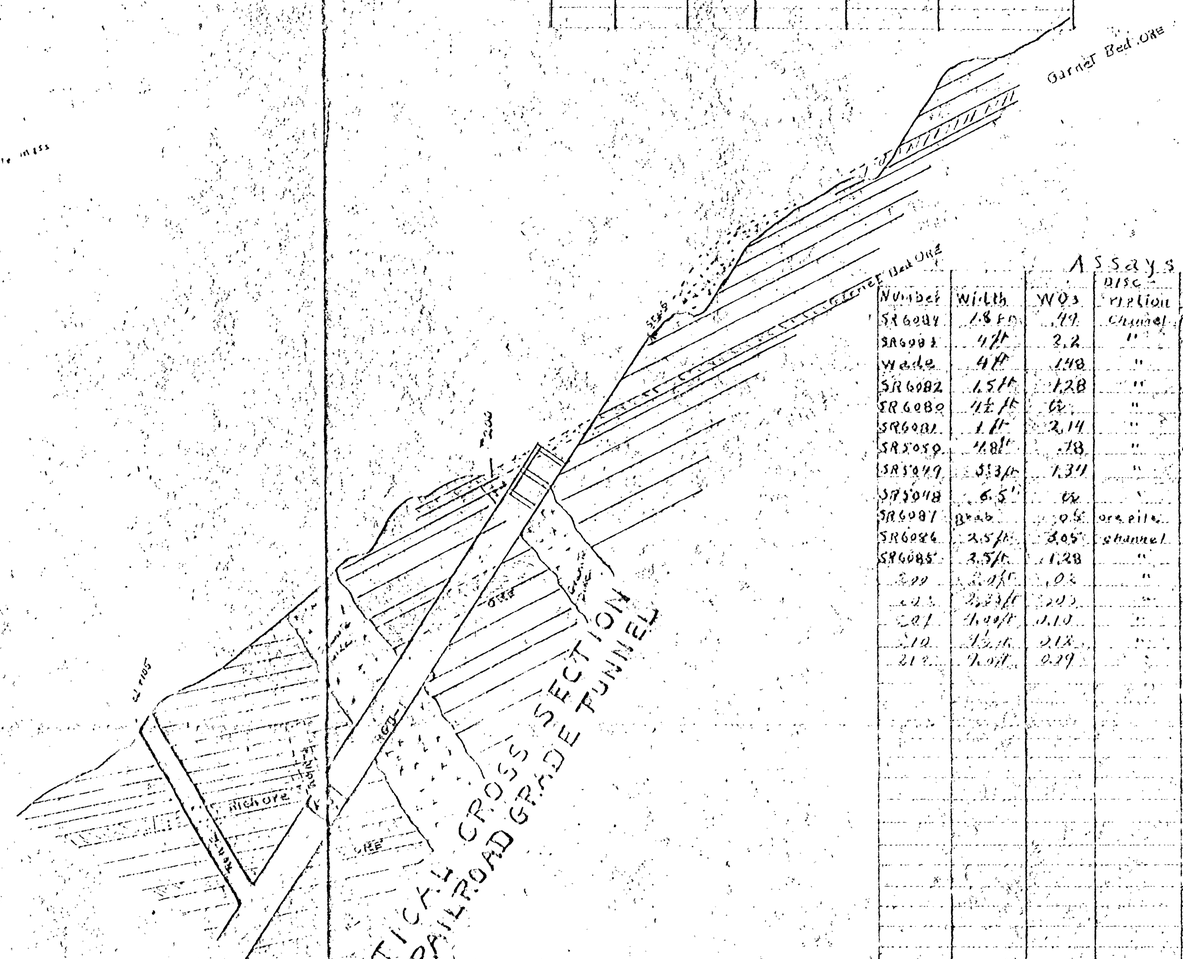
Scale 1" = 20 ft.

By W.R. Wade ~~Aug. 1 1953~~ ~~Sept 15~~ Oct 1
Marysville, Montana



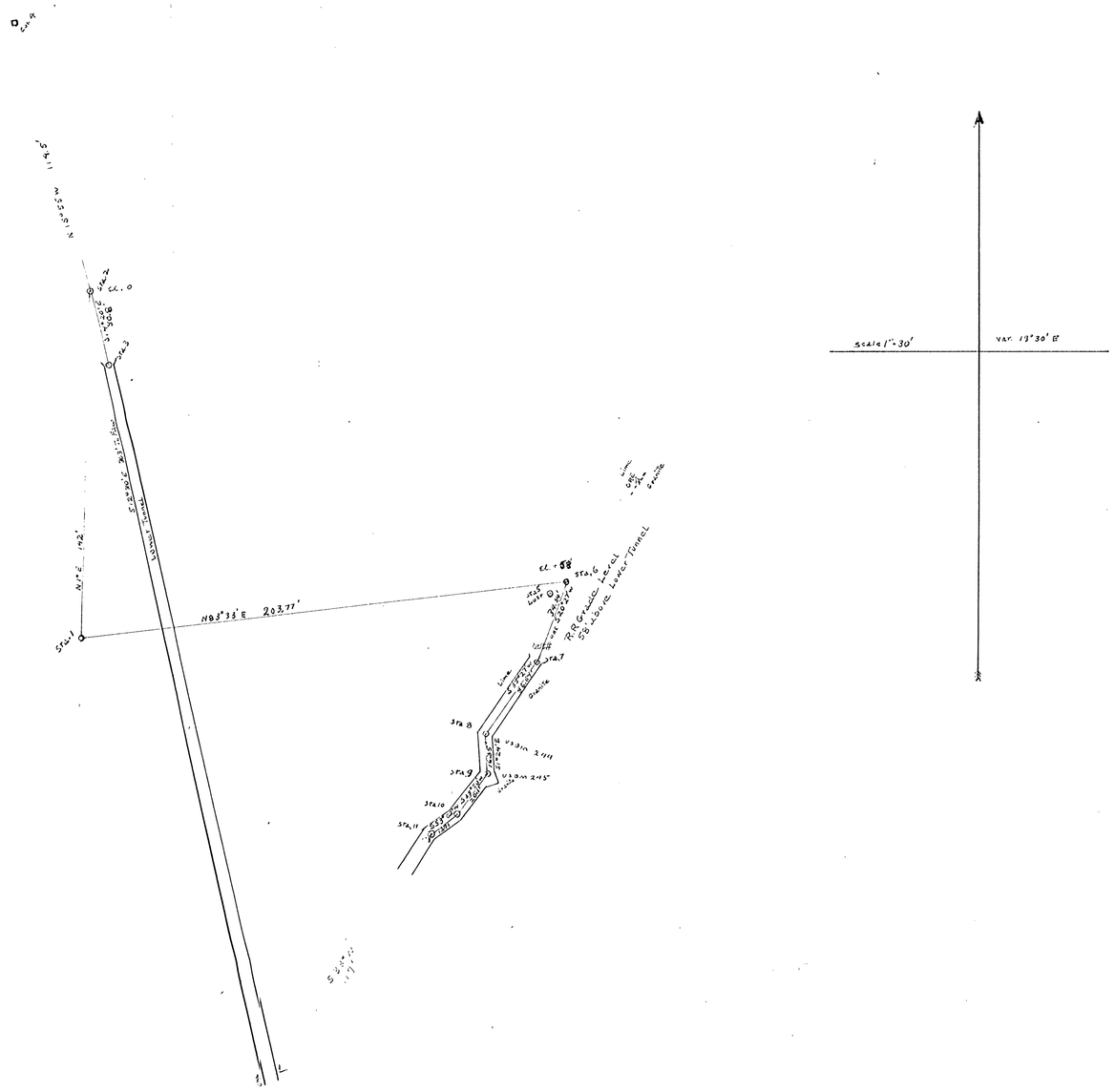
ASSAYS

Number	Width	WO3	Description	Sample by Whom	Where Assayed
RC1	3½'	0.3	Ore Bed	Obendorf	Goodall
RE1	3½'	1.17	Ore Bed	"	Hanks
RC2	"	.74	"	"	Goodall
RC2	60" by 18"	5.05	Ore pile	Obendorf	Mont. School of Mines
2	18"	1.1	Lower Tun	Wade	Goodall
3	48"	.01	"	"	"
4A	3 ft	0.103	Channel Ore Bed	"	"
4B	4 ft	.03	Below Ore Limestone	"	"
5	7 ft	.06	Channel Harvey Tun	"	"
RC3	26"	1.3	Channel	"	
RC4	Ore Pile	4.7	Same as RC3	"	McCarthy
6	14"	0.1	Lower Tunnel	"	Goodall
30		.98	Lower Tunnel	Obendorf	Hanks
31		.04	"	"	Hanks
101	not assayed				
102	"				
103	Composite Muck	0.00	Granite	Brophy	Goodall
104	"	.02	Ore Bed	"	McCarthy
105	"	0.18	" "	"	"
106	Grab Sample	0.176	" "	"	"
107	"	0.128	" "	"	"
108	"	0.15	" "	"	"
109					
110					
111					
125	Composite Muck	0.05		Brophy	UNION Assay
126	"	0.04		"	"
127	"	.04		"	Hanks
128	"	.02		"	Union
129	"	.04		"	Union
130	"	.05		"	Union
T-3	7 ft	.10	Tunnel Fr. Channel	Wade	Goodall
T-5	7 ft	.06	"	Wade	Goodall



Assays Continued

Number	Width	WO3	Description	Sample by Whom	Where Assayed
SR6084	1.8 ft	.99	Channel	Ray F. Robinson	Sunshine Mg. Co.
SR6083	4 ft	3.2	"	"	"
Wade	4 ft	1.48	"	Wade	Goodall
SR6082	1.5 ft	1.28	"	Robinson	Sunshine Mining Co.
SR6080	4½ ft	Tr.	"	"	"
SR6081	1 ft	2.14	"	"	"
SR5050	1.81'	.78	"	"	"
SR5049	5.3 ft	1.34	"	"	"
SR5048	6.5'	tr	"	"	"
SR6087	Grab	.05	ore pile	"	"
SR6086	2.5 ft	2.05	channel	"	"
SR6085	2.5 ft	1.28	"	"	"
200	2.0 ft	.02	"	Wade	Wade
201	2.33 ft	.245	"	"	"
201	4.04 ft	.110	"	"	"
210	1½ ft	.018	"	"	"
212	7.0 ft	0.29	"	"	"



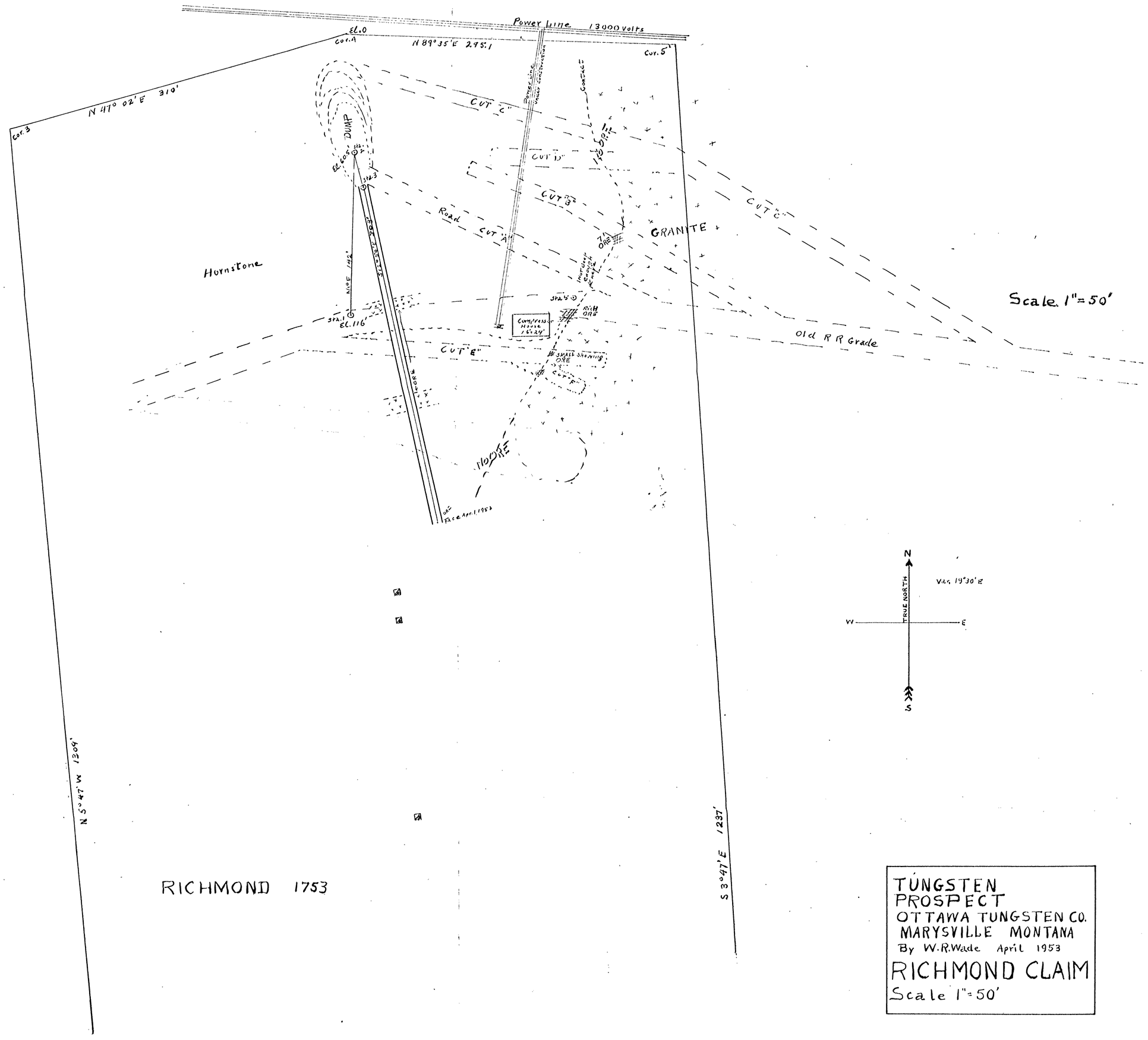
Adm E 490

OTTAWA TUNGSTEN CO.
Richmond Prospect
Marysville, Montana

Scale 1" = 30 ft.

W.R. Wade June 28, 1953

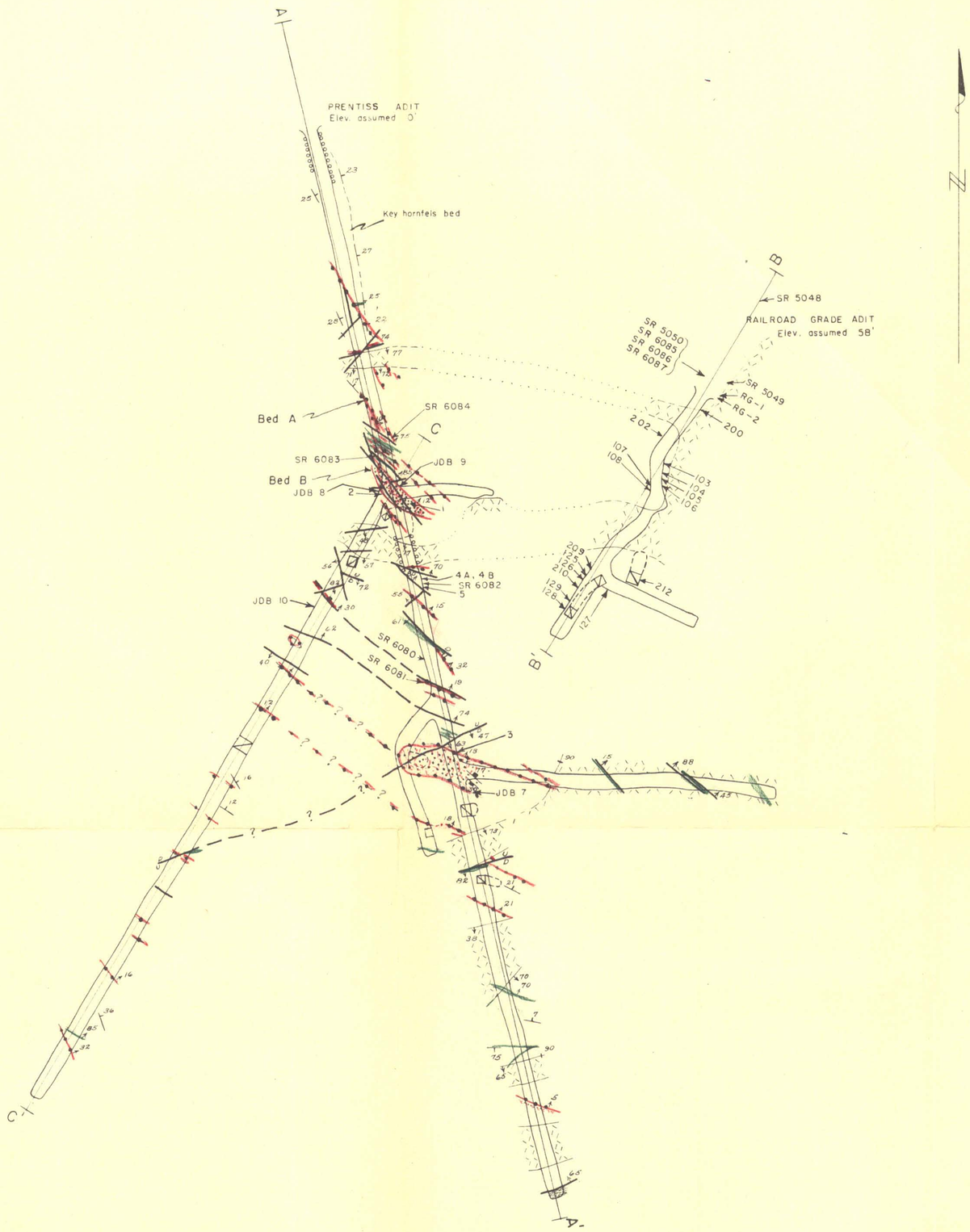
William Taylor Grant



TUNGSTEN
PROSPECT
OTTAWA TUNGSTEN CO.
MARYSVILLE MONTANA
By W.R.Wade April 1953

RICHMOND CLAIM

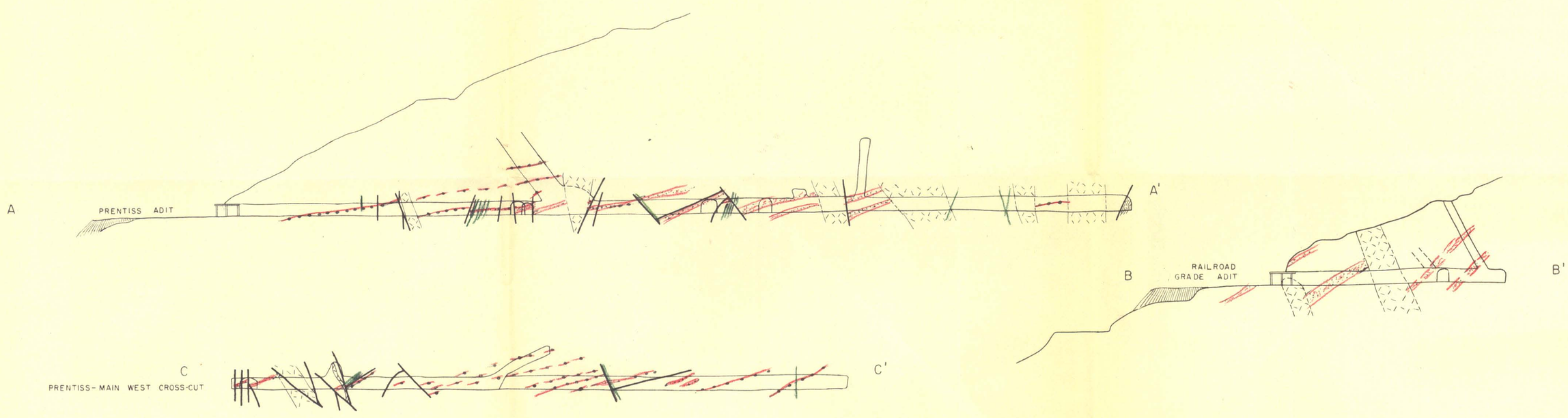
Scale 1" = 50'



NO.	WIDTH	WO_3	DESCRIPTION	SAMPLER	ASSAYER
RG-1	3.5' } same	0.3	ore bed	Obendorf	Goodall
RG-1	3.5' } pulp	1.17	" "	"	Hanks
RG-2	3.5'	.94	" "	"	Goodall
RG-2	60 lb. bulk	5.05	ore pile	"	Mont. School of Mines
RG-3	2.6"	1.3	channel,	Wade	Goodall
RG-4	ore pile	4.7	same as RG-2	"	McCarthy
1	14"	0.7	channel low Tun.	"	Goodall
2	18"	1.1	lower tunnel	"	"
3	48"	0.1	" "	"	"
4 A	3'	0.103	channel ore bed	"	"
4 B	4'	0.03	below ore limestone	"	"
5	7'	0.06	channel low Tun.	"	"
30		.98	lower tunnel	Obendorf	Hanks
31		.04	" "	"	"
103	drift round	0.00	muck – granite	Brophy	Goodall
104	" "	.02	" ore bed	"	McCarthy
105	" "	.18	" " "	"	"
106	" "	.176	" " "	"	"
107	" "	.128	" " "	"	"
108	" "	.15	" " "	"	"
125	drift round	0.05	" " "	"	Union Assay
126	" "	.04	" " "	"	" "
127	" "	.04	" " "	"	Hanks
128	" "	.02	" " "	"	Union
129	" "	.04	" " "	"	"
130	" "	.05	" " "	"	"
200	2'	.02	channel	Wade	"
202	2.3'	.03	"	"	"
209	4.0'	0.10	"	"	"
210	4.5'	.12	"	"	"
212	9.0'	.09	"	"	"
SR 5048	6.5	Tr.	"	Ray F. Robinson	Sunshine
5049	5.3'	1.34	"	"	"
5050	4.8'	.78	"	"	"
6080	4.5'	Tr.	"	"	"
6081	1.0'	2.14	"	"	"
6082	1.5'	1.28	"	"	"
6083	4.0	2.20	"	"	"
6084	1.8	.49	"	"	"
6085	2.5	1.28	"	"	"
6086	2.5	3.05	"	"	"
6087	grab	.05	grab ore pile	"	"
JDB-7	4.2"	0.05	channel	Bardill	U.S.B.M.
8	14"	0.92	"	"	"
9	14"-18"	0.07	"	"	"
10	8"	0.78	"	"	"

EXPLANATION

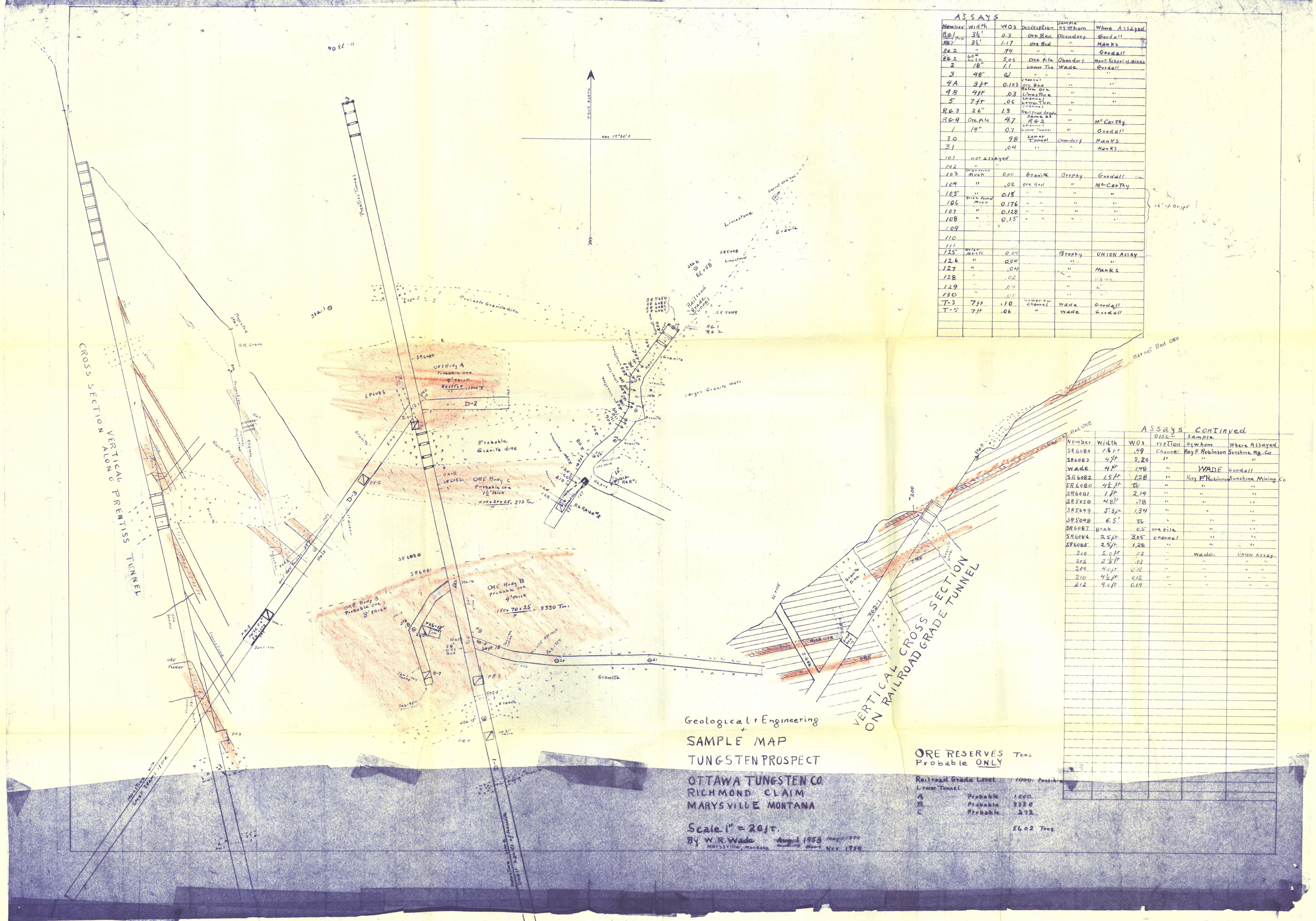
- Calcite vein
- Diorite
- Hornfels
- Tactite beds, showing dip
- Pegmatite
- Strike and dip of bed
- Faults, showing dip
- Contact showing dip, dashed where inferred, dotted where questionable



OTTAWA TUNGSTEN

LEWIS AND CLARK COUNTY, MONTANA

40 0 40 80 FEET



ASSAYS

Number	Width	WO3	Description	Sample by whom	Where Assayed
RG1 Same Pulp	3½'	0.3	Ore Bed	Obendorf	Goodall
RG1	3½'	1.17	Ore Bed	"	Hanks
RG2	"	.94	"	"	Goodall
RG2	60" bulk	5.05	Ore pile	Obendorf	Mont. School of Mines
2	18"	1.1	Lower Tun	Wade	Goodall
3	48"	Ø	" "	"	"
4A	3 ft	0.103	Channel Ore Bed	"	"
4B	4 ft	.03	Below Ore Limestone	"	"
5	7 ft	.06	Channel Lower Tun	"	"
RG3	26"	1.3	Channel Railroad Grade	"	
RG4	Ore pile	4.7	Same as RG2	"	McCarthy
1	14"	0.7	Channel Lower Tunnel	"	Goodall
30		.98	Lower Tunnel	Obendorf	Hanks
31		.04	"	"	Hanks
101	not assayed				
102	"				
103	Drift round muck	0.00	Granite	Brophy	Goodall
104	"	.02	ore Bed	"	McCarthy
105	"	0.18	" "	"	"
106	Drift Round Muck	0.176	" "	"	"
107	"	0.128	" "	"	"
108	"	0.15	" "	"	"
109					
110					
111					
125	Drift Muck	0.05		Brophy	UNION ASSAY
126	"	0.04		"	"
127	"	.04		"	Hanks
128	"	.02		"	UNION
129	"	.04		"	"
130	"	.05		"	"
T-3	7 ft	.10	Lower Tun Channel	Wade	Goodall
T-5	7 ft	.06	"	Wade	Goodall

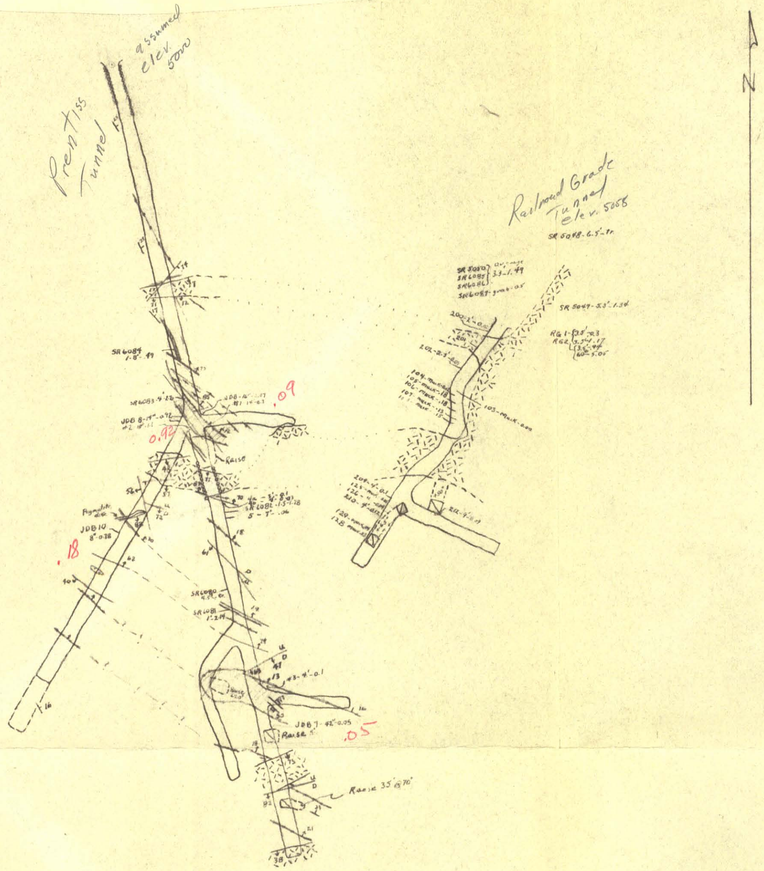
16' of Drift

ASSAYS CONTINUED

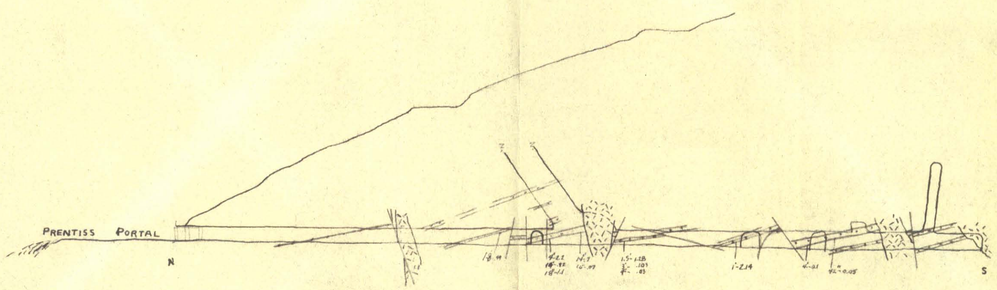
Number	Width	WO3	Description	Sample by whom	Where Assayed
SR6084	1.8 ft	.49	Channel	Ray F. Robinson	Sunshine Mg. Co
SR6083	4 ft	2.20	"	"	"
Wade	4 ft	1.48	"	WADE	Goodall
SR6082	1.5 ft	1.28	"	Ray F. Robinson	Sunshine Mining Co
SR6080	4½ ft	Tr	"	"	"
SR6081	1 ft	2.14	"	"	"
SR5050	4.8 ft	.78	"	"	"
SR5049	5.3 ft	1.34	"	"	"
SR5048	6.5'	Tr	"	"	"
SR6087	grab	0.5	ore pile	"	"
SR6086	2.5 ft	3.05	channel	"	"
SR6085	2.5 ft	1.28	"	"	"
200	2.0 ft	.02	"	Wade	UNION ASSAY
202	2⅓ ft	.03	"	"	"
209	4.0 ft	0.10	"	"	"
210	4½ ft	0.12	"	"	"
212	9.0 ft	0.09	"	"	"

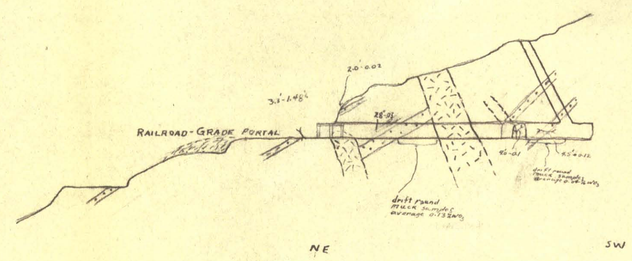
ORE RESERVES Tons
Probable ONLY

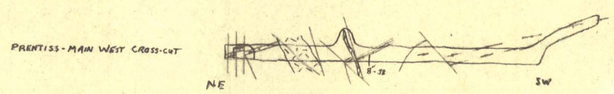
Railroad Grade Level		1000. Possible
Lower Tunnel		
A	Probable	1000.
B	Probable	3330
C	Probable	272
		5602 Tons



No.	Width	Wgt	Description	Sampler	Assayer
RG-1	2.5' (sum)	0.3	Orc bed	Crawford	Goodall
RG-1	2.5' (pile)	1.17	" "	"	HANKS
	3.5'	.94	"	"	Goodall
RG-2	60# bag	5.05	Ore pile	"	Hist. Soldiel Mus
RG-2	26"	1.3	Channel,	Wade	Goodall
RG-3					
RG-4	ore pile	4.1	Same as RG-2	"	McCarthy
1	14"	0.7	Channel, low bed	"	Goodall
2	18"	1.1	Lower tunnel	"	"
3	48"	0.1	" "	"	"
4A	3'	0.102	Channel on bed	"	"
4B	4'	0.72	below ore bins	"	"
5	7'	0.06	Channel, low tun	"	"
30		.93	Lower tunnel	Crawford	HANKS
31		.04			"
101	not assayed				
102	" "				
103	2-3" seam	0.60	Muck, surface	Crawford	Goodall
104	" "	.62	" on bed	"	McCarthy
105	" "	.18	" " "	"	"
106	" "	.176	" " "	"	"
107		.128	" " "	"	"
108		.15	" " "	"	"
109					
110	not assayed				
111					
125	Drift round	0.05	" "	"	Unsatisfactory
126	" "	.04	" "	"	"
127	" "	.09	" "	"	HANKS
128	" "	.12	" "	"	Lehigh
129	" "	.14	" "	"	"
130	" "	.05	" "	"	"
200	2'	.02	Channel	Wade	"
200-2	2.3	.07	"	"	"
200-9	4.0	.10	"	"	"
200-10	3.5	.12	"	"	"
200-12	1.5	.09	"	"	"
SR 5449	6.5'	Tr.	"	Rail Foreman	Crawford
SR 49	5.2	1.34	"	"	"
SR 50	4.8	.75	"	"	"
SR 51	4.2	.4	"	"	"
6051	1.1	0.14	"	"	"
6052	1.1	0.13	"	"	"
6053	2.2	0.26	"	"	"
6054	1.8	.17	"	"	"
6055	2.1	0.25	"	"	"
6056	2.2	0.25	"	"	"
6057	2.2	0.25	"	"	"
6058	2.2	0.25	"	"	"
6059	good sample	0.5	good sample		"
JOB 7	42"	0.05	Channel	Randall	USBM
8	14"	0.97	"	"	"
9	14"	0.09	"	"	"
10	8"	0.18	"	"	"



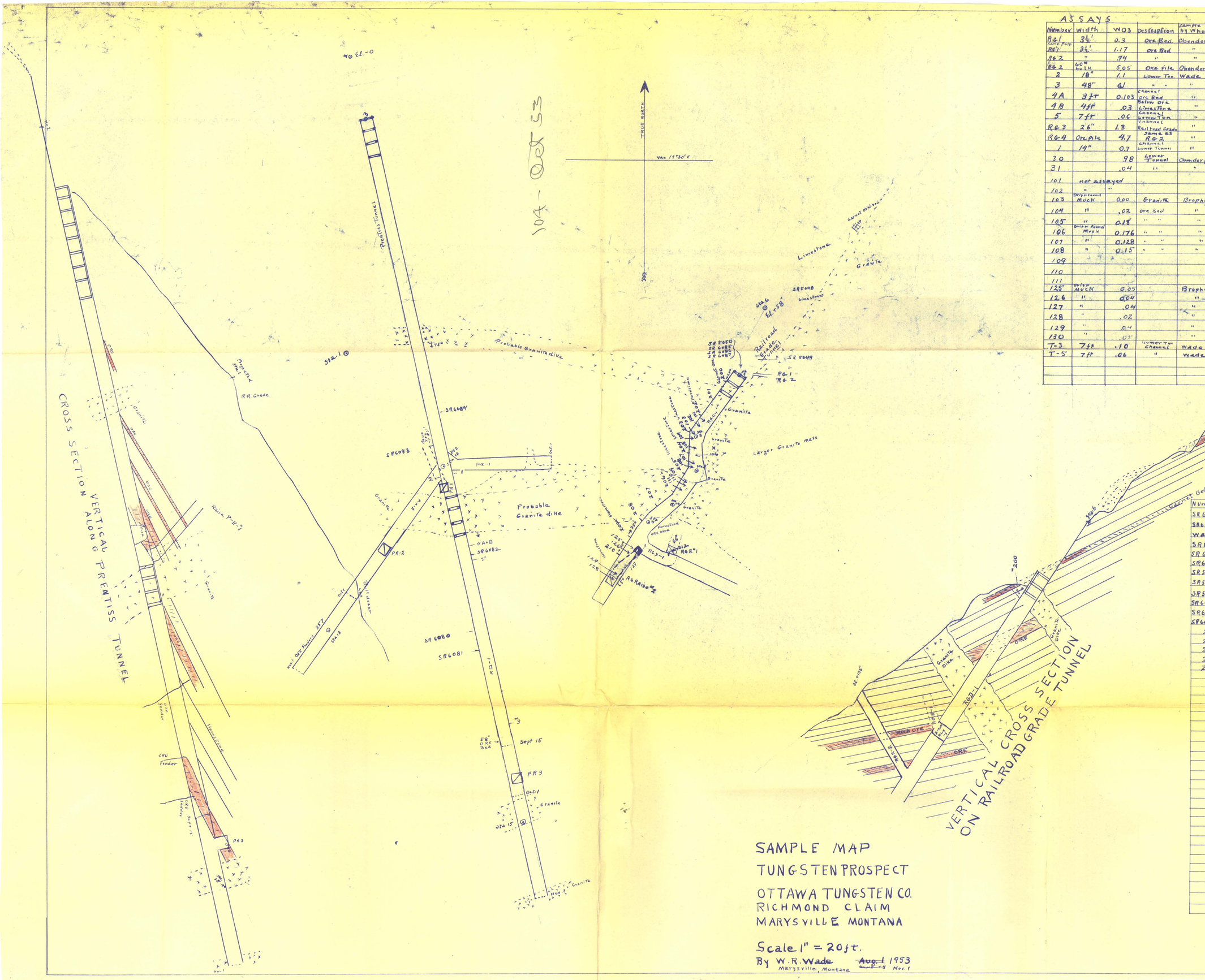




OTTAWA TUNGSTEN
DMEA DOCKET
No. 2658

1"=40'

With Reg letter 3/2/54
Dmea 2658



ASSAYS

Number	Width	WO3	Description	Sample by Whom	Where Assayed
RG1 Same Pulp	3½'	0.3	Ore Bed	Obendorf	Goodall
RG1'	3½'	1.17	Ore Bed	"	Hanks
RG2	"	.94	"	"	Goodall
RG2	60# bulk	5.05	Ore Pile	Obendorf	Mont. School of Mines
2	18"	1.1	Lower Tun	Wade	Goodall
3	48"	01	" "	"	"
4A	3ft	0.103	Channel Ore Bed	"	"
4B	4ft	.03	Below Ore Limestone	"	"
5	7ft	.06	Channel Lower Tun	"	"
RG3	26"	1.3	Channel Railroad Grade	"	
RG4	Ore Pile	4.7	James 23 RG2	"	McCarthy
1	14"	0.7	Channel Lower Tunnel	"	Goodall
30		.98	Lower Tunnel	Obendorf	Hanks
31		.04	"	"	Hanks
101	not assayed				
102	"	"			
103	Drip round Muck	0.00	Granite	Brophy	Goodall
104	"	.02	Ore Bed	"	McCarthy
105	"	0.18	" "	"	"
106	Drip Round Muck	0.176	" "	"	"
107	"	0.128	" "	"	"
108	"	0.15	" "	"	"
109					
110					
111					
125	Drip MUCK	0.05		Brophy	UNION Assay
126	"	0.04		"	"
127	"	.04		"	Hanks
128	"	.02		"	UNION
129	"	.04		"	"
130	"	.05		"	"
T-3	7ft	.10	Lower Tun Channel	Wade	Goodall
T-5	7ft	.06	"	Wade	Goodall

16' of Drift

ASSAYS CONTINUED

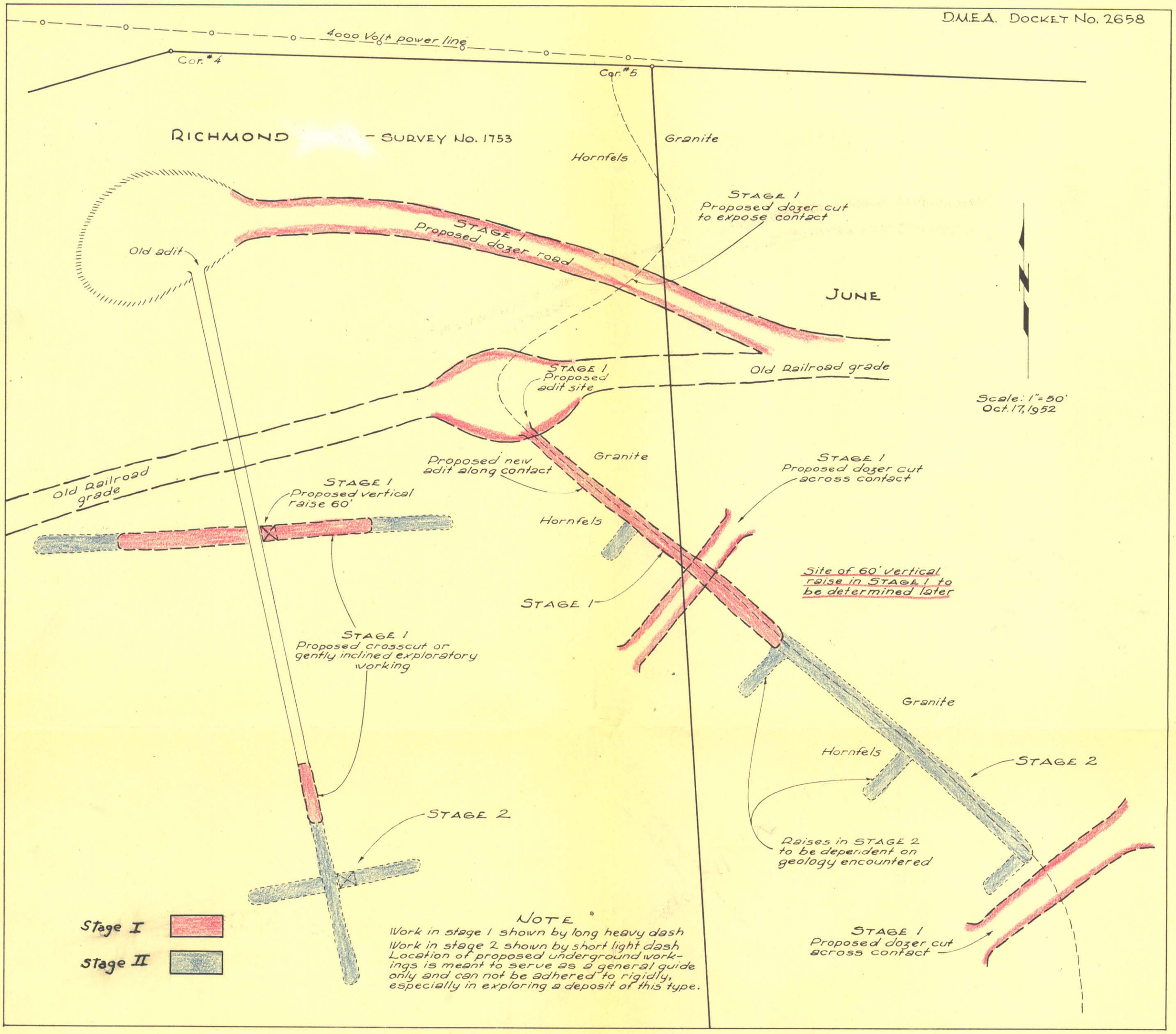
Number	Width	WO3	Description	Sample by whom	Where Assayed
SR6084	1.8 ft	.49	Channel	Ray F. Robinson	Sunshine Mg. Co.
SR6083	4 ft	2.20	"	"	"
wade	4 ft	1.48	"	WADE	Goodall
SR6082	1.5 ft	1.28	"	Ray F. Robinson	Sunshine Mining C.
SR6080	4½ ft	tr	"	"	"
SR6081	1 ft	2.14	"	"	"
SR5050	4.8 ft	.78	"	"	"
SR5049	5.3 ft	1.34	"	"	"
SR5048	6.5'	tr	"	"	"
SR6087	grab	0.5	ore pile	"	"
SR6086	2.5 ft	3.05	channel	"	"
SR6085	2.5 ft	1.28	"	"	"
200	2.0 ft	.02	"	Wade	UNION Assay
202	2½ ft	.03	"	"	" "
209	4.0 ft	0.10	"	"	" "
210	4½ ft	0.12	"	"	" "
212	9.0 ft	0.09	"	"	" "

SAMPLE MAP
TUNGSTEN PROSPECT

OTTAWA TUNGSTEN CO.
RICHMOND CLAIM
MARYSVILLE MONTANA

Scale 1" = 20 ft.

By W. R. Wade ~~Aug. 1~~ 1953 ~~1~~ Nov. 1
Marysville, Montana



MAP SHOWING PROPOSED EXPLORATION WORK ON RICHMOND AND JUNE CLAIMS NEAR MARYSVILLE