

GEOPHYSICAL MAGNETOMETER SURVEY

JEAN Claims 31 - 36 Claim Sheet No. 105-D-10

Lat. $60^{\circ}30'$ - $60^{\circ}45'$

Long. $134^{\circ}30'$ - $135^{\circ}00'$

Whitehorse Mining District, Whitehorse, Y.T.

Submitted By: R.G. Hilker, P.Eng.,



TABLE OF CONTENTS

	Page No.
INTRODUCTION	1
Location Claims	
H.C. Fromme Registered Owner	
Survey Conducted by New Imperial Mines	
Surface Features and Flora	
SURVEY PERSONNEL	1
Name and Address of persons Employed in Survey	
SURVEY GRID CONTROL	2
Base Lines	
Cross Lines	
DESCRIPTION OF MAGNETOMETER AND METHOD USED	2
Magnetometer - Magnetometer Operation	
Field Procedure	
Calculations	
GENERAL GEOLOGY	3
Formations	
Reference to Published Geology	
Economic Geology	
INTERPRETATION OF MAGNETIC SURVEY	4
CONCLUSIONS	5
RECOMMENDATIONS	5
AFFIDAVIT OF EXPENDITURES	5
IN POCKET	
Contour Plan of Magnetometer Survey JEAN mining claims	
Location Plan - JEAN mining claims	
Calculation Sheets - JEAN mining claims	

INTRODUCTION

A magnetometer survey was conducted over the JEAN mining claims, numbers 31,32,33,34,35,36. These claims are located on Claim Sheet 105-D-10, Lat. 60°30' - 60°45' and Long. 134°34' - 135°00' of the Whitehorse Mining District in the Yukon Territory. The claims are in the vicinity of Wolf Creek and the intersection of the Alaska Highway.

Due to a lack of exposed bedrock a magnetometer survey was conducted to investigate the possibility of mineral occurrence in the subsurface of the JEAN claims 31 to 36 inclusive. The complete magnetometer survey is also submitted, in report form, to the Whitehorse Mining Recorder's Office for assessment work to be applied to the claims.

The magnetometer survey was done between September 27 and November 5, 1965.

The formentioned claims are registered to Mr. H.C. Fromme, contractor of Whitehorse in the Yukon Territory and optioned by New Imperial Mines of Whitehorse in the Yukon Territory. New Imperial Mines has undertaken the responsibility of the assessment work on the claims.

The most important surface feature is the Wolf Creek banks and old flood plane, that has been eroded into the glacial debris from the Cordilleran Ice-Sheet. The ice-sheet is of probable Pleistocene age and is described by Wheeler (Memoir 312, G.S.C.). The outline of the creek banks and flood plane are shown on the location map that accompanies this report.

The forest growth that covers the claims consists of white spruce and lodge-pole pine on the higher ground and in places willow and large white spruce on the lower ground.

The claims are located in the Whitehorse trough and are at an approximate elevation of 2400 feet. Topographic surface features vary about one hundred and fifty feet on the claims.

SURVEY PERSONNEL

Magnetometer Technicians:	Mr. Wayne Ash Box 2586 Whitehorse, Yukon
Assistants:	Mr. Christopher Stanford Box 2902 Whitehorse, Yukon
	Mr. Boris Federoff 502 Cook Street Whitehorse, Yukon
Interpretation & Reports:	Mr. R.G. Hilker, P.Eng., Box 566 Whitehorse, Yukon

SURVEY GRID CONTROL

The magnetometer survey was conducted over the JEAN claims on a four hundred foot line spacing grid from an irregular bearing central base line. All distances were paced and all directions were ascertained by a Brunton compass. The blazed claim lines were used for the base line. The direction of the base line and grid cross lines are shown on the accompanying location map that is in the pocket at the back of the report.

Magnetometer readings were taken at one hundred foot intervals along the cross lines.

DESCRIPTION OF MAGNETOMETER AND METHOD USED

Magnetometer

The instrument used in conducting the survey was a Sharpe, Model DI-M magnetometer and consists of an instrument head and tripod. The magnetometer is light weight and portable and is operated by one man. For extensive magnetic intensities an auxiliary magnet can be attached to an extension rod beneath the instrument head. The magnetometer reads in degrees of deflection, with a sensitivity of 60 gammas per degree. The vertical magnetic component of the total magnetic field is measured with this instrument.

Magnetometer Operations:

- a) The instrument head is firmly attached to the tripod and remains this way throughout the days work.
- b) Set Up - the operator stands facing in the general north direction and places the tripod and instrument in an upright position over the station to be read.
- c) Levelling - The instrument head is levelled by use of a swivel head and fish-eye bubble.
- d) Orientation - The needle housing, in the head of the instrument, is placed in a horizontal position and the needle unclamped. In this position the magnetic needle is free to seek the magnetic north direction. The needle housing is then revolved and locked so that the zero mark corresponds with the north end of the magnetic needle. In this position the instrument is oriented into the proper azimuth. The instrument head is then revolved into the vertical position. The needle is placed at the zero mark and permitted to fall freely downward. The farthest point of the swing is read and recorded in the note book.

Field Procedure:

A magnetometer base station was established at a central point on the JEAN claims. The base station was assigned a relative value of 5400 gammas and all magnetometer stations were referred to the common base.

Readings were taken at the base station and recorded in a note book with the time. The operator then proceeded to read magnetometer stations at one hundred foot intervals along the lines. To control and compensate for

magnetic diurnal, readings were taken at the base station at approximately two hour intervals.

The magnetometer operator's assistant paced one hundred foot intervals and maintained the proper bearing of the line with a Brunton compass. For more accuracy, the operator also paced the one hundred foot intervals. All the field work was done in this manner.

Calculations:

The field magnetometer readings were reduced to a common base of 5400 gammas, by making a diurnal correction. The diurnal was distributed over the number of stations in the time interval between base station readings. The individual stations were calculated into gammas by multiplying 60 gammas per degree of deflection. No temperature correction was applied as there was little difference in the temperature range during the magnetometer survey and the alloys used in the instrument construction are little affected by the temperature change.

A complete set of magnetometer notes and calculations are included with this report and are in the back pocket. The calculations were reduced by the magnetometer operator and checked by his assistant.

GENERAL GEOLOGY

The six JEAN claims and surrounding area is completely covered by Pleistocene glacial debris and no outcrops were found to occur. From the appearance of the banks along Wolf Creek, it is estimated that the JEAN claims have from 150-200 feet of overburden covering them before bedrock would be encountered.

The claims are located within the geological area that is referred to as the Whitehorse Copper Belt and within the Whitehorse trough. The Whitehorse Copper Belt comprises Triassic and Jurassic sedimentary rocks intruded by a Cretaceous granitic stock and in parts capped by a Quaternary basalt.

Formations

Lewis River Group - Upper Triassic

The sedimentary rocks consist of greywacke, siltstone, argillite, quartzite and limestone.

Laberge Group - Lower Jurassic and Later

The sedimentary rocks that occur in this formation are as follows: greywacke, siltstone, quartzite, conglomerate, argillite and hornfels

Coast Intrusions - Cretaceous

The intrusion rock types are: granite, quartz monzonite to granodiorite and diorite.

Miles Canyon Basalt - Recent

The Miles Canyon Basalt is the youngest rock in the area and in places caps the older sedimentary rock and granitic intrusive.

Reference to Published Geology

1. J.O. Wheeler - Memoir 312,
Whitehorse Map-Area Yukon Territory;
Geological Survey of Canada.
2. ED. Kindle - Paper 63-41;
Copper and Iron Resources, Whitehorse
Copper Belt, Yukon Territory -
Geological Survey of Canada.

Economic Geology

Siliceous skarns with copper sulphides and in parts with magnetite developed in favorable structural and contact zones between the Coastal Intrusions granitic rocks and the Lewes River limestone. The mineralization is very irregular in shape and scattered in widespread deposits over approximately eighteen miles along the west side of the Whitehorse trough. These deposits are considered to be contact metasomatic in origin and with copper mineralization occurring in the skarns and, to a lesser degree, in the granitic intrusive.

Small copper deposits occur about three miles to the southwest of the JEAN claims, at the Keewena and Copper Cliff properties. Granitic rocks of the Coastal Intrusive, are shown to underlie the JEAN claims, according to Geology Map 49-1962 that accompanies Kindles Paper 63-41. However, the nearest outcrop shown on the geology map is about two and one quarter miles further south, on the Alaska Highway, from the JEAN claims and Wolf Creek. The thick mantle of glacial drift material could cover an island of limestone surrounded by granitic rock. Such a geological feature may be favorable for copper mineralization, and magnetite of the type that occurs in the area to the west of the JEAN claims.

INTERPRETATION OF MAGNETIC SURVEY

The magnetic readings were plotted on plan and contoured at 20 gamma intervals. The magnetic contours appear to trend in a northeastern direction and to indicate two magnetic anomalies. The two anomalies are separated by Wolf Creek and are located north and south of the creek. The magnetic anomalies appear to conform with the general trend and intensities that are indicated on Aeromagnetic map 1413G of the MacCrae area at the intersection of Wolf Creek and the Alaska Highway. The separation of the two magnetic anomalies by Wolf Creek may indicate a recent fault zone.

The vertical component of the total magnetic field that underlies the JEAN claims varies from a high of 6890 gammas to a low of 5030 gammas or with a relative difference of 1860 gammas. These differences were measured from a magnetometer base station that was assigned a value of 5400 gammas.

The variable magnetic intensities of the underlying rocks may be due to Miles Canyon basalt. The basalt contains more magnetite than the surrounding rock types and would therefore stand out in magnetic relief. The Miles Canyon basalt, being the youngest extrusive in the area, and magnetic, would cap all other formations and distort any older magnetic trends. The basalt may be capping granitic rock of the Coastal Intrusives or limestone of the Lewis River Group.

CONCLUSIONS

The JEAN claims 31 through 36 inclusive contain two magnetic anomalies located to the north and south of Wolf Creek. Wolf Creek may be a recent development of fault zone. The two anomalies are probably due to underlying Miles Canyon basalt that is highly magnetic. The basalt may cap either, or both, granitic intrusives and limestone. Should such formations be present, favorable skarn rock types might contain copper mineralization. It is more likely that the basalt caps granitic rock.

RECOMMENDATIONS

Should extra funds be available during the 1965-66 exploration year a diamond drill hole on the property would give valuable geological information. The JEAN claims are located in an area of excessive drift covering and confirmation of the underlying bedrock would be helpful during future exploration in this area.

A suitable location for the diamond drill hole would be 100 feet north of the claim line, between JEAN 32 and JEAN 31 mining claim, on line 4+00 N.W., at the south edge of Wolf Creek. The drill hole should dip at 60° with a north bearing. Sufficient water is available from Wolf Creek for the drilling operation. Access to the drilling site can be made by driving through the government camp ground located on the east side of the Alaska Highway at the intersection with Wolf Creek. Broken and fractured bedrock should be expected during the drilling of the hole and would be due to the Wolf Creek fault zone.

AFFIDAVIT

I, R.G. Hilker P.Eng., agent for New Imperial Mines, of Box 566 in Whitehorse, Yukon Territory, make oath and say to my knowledge the following is correct:

That the expenditures and costs incurred for a magnetometer survey and examination of the JEAN 31 through 36 mining claims totals \$825.00.

That I have done, and caused work to be done on the JEAN 31 through 36 inclusive, mineral claims - located near the intersection of Wolf Creek and the Alaska

Highway on Claim Sheet No. 105-D-10 of the Whitehorse Mining District, Whitehorse, Yukon Territory, Lat. 60°30' - 60°45' and Long. 134°30' - 135°00'.

On behalf of: H.C. Fromme, contractor of Whitehorse, Yukon Territory; by New Imperial Mines of Whitehorse, Yukon Territory.

The following is a detailed statement of such expenditures and work done:

1. Magnetometer Field Work:

Operator and assistant, wages, instrument, transportation and supervision - September 27, 1965
October 5, 6, 7, 8 and 12, 1965
Six days at \$75.00 per day = \$450.00

2. Calculations and Draftings:

October 13, 14, 15 and 18, 1965
Total Cost = \$175.00

3. Report Writings:

Typing and prints of plans = \$200.00

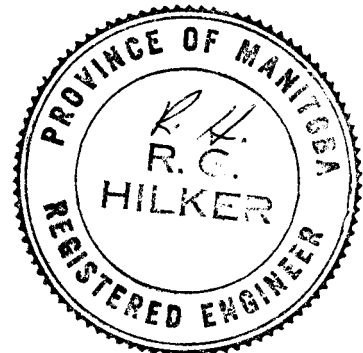
Total expenditures incurred for magnetometer survey of JEAN 31 - 36 mining claims - = \$825.00

SWORN and subscribed to at

Whitehorse
this 16 day of Nov 1965

[Signature]
Notary Public

[Signature]
R.G. Hilker, P.Eng., Agent for
New Imperial Mines - Whitehorse
Yukon Territory.



Line 0+00 NW

B.S. I - 54008

Inst: W. Ash

Az. 310°

Date: Sept 27, 1965

Ass't: B. Federov

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
B.S. I	12:28	73	78	77	76						
0+00	12:35	75	73	76	74.3	-1.7	-102	+7	-95	5305	
1+00	12:42	79	80	80	79.7	+3.7	+222	+14	+236	5636	
2+00	12:47	76	79	79	78	+2	+120	+21	+141	5541	West end of creek
3+00	12:51	82	88	86	85.3	+9.3	+558	+28	+586	5990	South edge of highway
4+00	12:53	88	85	89	87.3	+11.3	+678	+35	+713	6110	On highway
5+00	12:56	88	88	89	88.3	+12.3	+738	+42	+780	6180	North shoulder of highway
6+00	1:03	88	89	92	89.7	+13.7	+822	+49	+871	6270	
7+00	1:07	87	87	85	86.3	+10.3	+618	+56	+674	6070	
8+00	1:11	88	86	83	85.7	+9.7	+582	+63	+645	6050	
9+00	1:14	84	85	83	84	+8	+480	+70	+550	5950	
10+00	1:16	81	80	84	81.7	+5.7	+342	+77	+419	5820	
11+00	1:21	75	79	79	77.7	+1.7	+102	+84	+186	5590	
12+00	1:21	89	87	87	87.7	+11.7	+702	+91	+793	6190	
13+00	1:30	80	85	85	83.3	+7.3	+438	+98	+536	5940	
14+00	1:32	85	87	86	86	+10.0	+600	+105	+705	6110	
15+00	1:39	82	81	85	82.7	+6.7	+402	+112	+514	5910	

Within Range of Hydro Lines

Page (2)

Line -4+00 NW

B.S. I - 54000

Inst: W. ASH

Az. 310°

Date: Sept 27/1965

Ass't: B. Federov

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
15+00	1:46	82	89	91	87.3	+11.3	678	117	795	6200	
14+00	1:52	92	88	92	94	+18	1080	122	1200	6600	
13+00	1:55	90	88	90	89.7	+13.7	822	129	951	6350	
12+00	2:03	96	86	88	90	+14	840	136	976	6380	
11+00	2:08	90	85	85	86.7	+10.7	642	142	784	6180	
10+00	2:11	86	88	87	87	+11	660	149	809	6210	
9+00	2:15	82	84	87	84.3	+8.3	498	156	654	6050	
8+00	2:20	88	87	87	87.3	+11.3	678	163	841	6240	Cross creek at 7+500
7+00	2:24	88	95	91	90.7	+14.7	882	170	1052	6450	
6+00	2:28	88	92	91	90.3	+14.3	858	177	1035	6440	
5+00	2:37	86	87	88	87	+11.0	660	184	844	6240	Top of creek bank
4+00	2:43	88	88	85	87	+11.0	660	190	850	6250	Creek to North 30'
3+00	2:48	85	79	83	82.3	+6.3	378	197	575	5970	Brow of 50' crk. bank
2+00	2:53	82	78	78	79.3	+3.3	198	203	401	5800	
1+00											
0+00	3:05	79	80	81	80	+4	240	208	448	5850	Cross claim line @ 1+000
B.S. I.		72	74	72	72.5	-3.5	-210				

Line 0+00 SE
Az. 130°

B.S. I - 54008

Inst: W. Ash

Date: Sept 27/65

Ass't: B. Fedorov

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	ΣX60	Diurn.	Change	Value	Remarks
B.S. I	3:05				72.5						
1+00	3:08	74	76	76	75.3	2.8	168	-6	162	5560	
2+00	3:14	77	81	79	79	6.5	390	-12	380	5780	
3+00	3:16	79	76	78	77.7	5.2	312	-18	294	5690	
4+00	3:19	74	78	71	74.3	1.8	108	-24	84	5400	
5+00	3:25	72	75	78	75	2.5	150	-30	120	5520	
6+00	3:33	77	75	75	75.7	3.2	192	-36	157	5560	
7+00	3:37	77	77	78	77.3	4.8	288	-42	248	5650	Blow of hill
8+00	3:42	77	82	79	79	6.5	390	-48	345	5750	cross road
9+00	3:48	76	80	76	77.3	4.8	288	-54	234	5630	
10+00	3:52	86	85	83	85.3	12.8	768	-60	708	6110	
11+00	3:57	76	76	75	75.7	3.2	192	-66	126	5530	
12+00	4:02	69	76	69	71.3	-1.2	72	-72	—	0	12+30' blow of hill
13+00	4:06	78	82	79	79.7	4.5	270	-78	192	5570	
14+00	4:09	77	75	75	75.7	3.2	192	-84	108	5510	
15+00	4:15	78	78	78	78	5.5	330	-90	240	5640	
B.S. I	4:26	74	74	73	74	1.5	90	96			

Line - 4+00 SE
Az. 130°

B.S. I - 54000

Inst: W. ASH

Date: October 5/65

Ass't: C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	ΣX60	Diurn.	Change	Value	Remarks
B.S. I	9:				70						
0+00	9:51	72	73	74	73	2.9	174			5570	
1+00	9:57	77	74	79	76.7	6.7	402			5800	
2+00	10:13	77	75	77	76.3	6.3	378			5780	
3+00	10:18	75	78	79	77	7.1	420			5720	
4+00	10:22	77	74	78	76	8.0	480			5880	
5+00	10:25	79	80	83	81	11.0	660			6060	seen - 90' BM 3238
6+00	10:30	78	77	78	77.8	7.8	468			5870	to push wall
7+00	10:35	75	81	78	78	8	480			5880	
8+00	10:39	78	78	80	78.7	8.9	534			5930	
9+00	10:43	76	76	76	76	6	360			5760	
10+00	10:49	78	77	79	78	8	480			5880	middle of 80' bluff
11+00	10:53	80	81	81	80.7	16.7	642			6040	directly drift at top of 80' bluff
12+00	10:56	76	79	82	79	9	540			5940	
13+00	10:58	78	77	80	78.3	8.3	498			5900	
14+00	11:01	79	70	75	74.7	4.7	282			5680	
15+00	11:05	79	84	76	79.7	9.7	582			5980	

Line 16 +00 N
Az. 70

B.S. I - 54008
Date: Oct 7/65

Inst: W. Ash
Ass't: C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
15+00	11:20	87	84	89	86.7	18	1080	-374	706	6110	
14+00	11:23	80	78	86	81.3	12.4	756	-398	358	5760	
13+00	11:27	84	90	81	85	16.3	978	-421	557	5960	
12+00	11:30	88	89	89	88.7	20	1200	-445	775	6180	cross line cross Extended @ 11:20
B.S.I.	11:45				76.5	7.8	468	-468	—		
B.S.I.	12:45				78.0						
11+00	1:10	91	95	95	93.7	15.7	942	38	980	6380	
10+00	1:15	85	89	86	86.7	8.7	522	76	600	6000	
9+00	1:20	90	91	95	92	14	840	114	950	6350	Bottom of 40' hill
8+00	1:24	90	94	88	90.7	12.7	762	152	910	6310	cuts Survey line
7+00	1:27	94	93	97	94.7	14.7	882	190	1070	6470	
6+00	1:37	88	92	90	90	12	720	227	950	6350	
5+00	1:48	83	80	80	81	13	780	265	1040	6440	cross creek @ 4+50N
4+00	1:52	84	78	81	81	13	780	303	1080	6480	1/2 way up 20' hill
3+00	1:55	81	79	77	79	1	60	341	400	5800	brow of 70' hill
2+00	1:59	82	83	84	83	5	300	379	680	6080	
1+00	2:04	78	80	82	80	2	120	417	540	5940	
0+00	2:09	80	82	83	81.7	3.7	222	455	680	6080	

Line 20 +00 N
Az. 70

B.S. I - 54000
Date: Oct 7/65

Inst: W. ASH
Ass't: C/Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
1+00	2:20	76	77	77	76.7	-13	-78	493	420	5820	Bottom of 70' hill
2+00	2:24	83	80	83	82	+4	+240	531	770	6170	low ground
3+00	2:28	80	75	74	76.3	-1.7	-102	569	470	5870	cross creek @ 2+50N
4+00	2:35	70	70	72	71.7	-6.3	-378	606	230	5630	
5+00	2:42	73	73	68	70.7	-7.3	-438	644	210	5610	
6+00	2:49	71	72	72	71.7	-6.3	-378	682	300	5700	
7+00	2:56	71	76	66	71.0	-7.0	-420	720	300	5700	
8+00	3:02	78	73	76	75.7	-2.3	-138	758	620	6020	
9+00	3:08	76	70	72	72.7	-5.3	-318	796	480	5880	bottom of 50' hill
10+00	3:12	76	75	73	74.7	-3.3	-198	834	640	6040	
11+00	3:16	82	80	77	79.7	+1.7	+102	872	970	6370	
12+00	3:20	72	73	76	73.7	-4.3	-258	910	650	6050	
13+00	3:24	75	76	73	74.7	-3.3	-198	948	750	6150	
14+00	3:28	73	69	72	71.3	-6.7	-402	985	880	5980	
15+00	3:32	67	69	71	71.3	-6.7	-42	1023	620	6020	
B.S.I.	3:52	60	60	60	60.3	-17.7	-1062	+1062			

Page 7
 Line 12+00
 Az. 187°

B.S. I - 54008
 Date: October 6/65
 Inst: W. Ash
 Ass't: C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Ø X 60	Diurn.	Change	Value	Remarks
15+00	1:10	80	77	77	78	7	42	12	54	5450	
14+00	1:13	80	82	79	80.3	9.3	558	13	571	5970	
13+00	1:16	82	80	80	80.7	9.7	582	15	597	6000	
12+00	1:20	78	77	78	77.7	6.7	402	14	418	5820	
11+00	1:23	79	80	80	79.7	8.7	522	18	540	5940	
10+00	1:26	80	82	81	81	10	600	19	619	6020	
9+00	1:30	81	77	79	79	8	480	21	501	5900	E Bush Road
8+00	1:33	76	81	76	77.7	6.7	402	22	424	5820	
7+00	1:37	77	80	78	78.3	7.3	438	24	462	5860	
6+00	1:40	78	80	82	80	9.0	540	25	565	5970	
5+00	1:44	78	78	80	79.3	8.3	498	27	525	5930	
4+00	1:47	75	76	79	76.3	5.3	318	28	346	5750	
3+00	1:50	77	79	79	78.3	7.3	438	30	468	5870	
2+00	1:54	80	81	82	81	10	600	31	631	6030	
1+00	1:57	79	80	81	80	9	540	33	573	5970	
0+00	2:00	78	79	79	78.7	7.7	462	34	496	5900	

Line 20+00 S
 Az. 187°
 B.S. I - 54000
 Date: October 6/65
 Inst: W. ASH
 Ass't: C. Stanford

Page 8

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Ø X 60	Diurn.	Change	Value	Remarks
15+00	2:08	75	77	80	77.3	6.3	378	36	414	5810	
14+00	2:12	79	79	82	79.7	8.7	522	37	559	5960	
13+00	2:15	78	82	82	80.7	9.7	582	39	621	6020	
12+00	2:18	79	81	80	80.7	9.7	582	40	622	6020	
11+00	2:22	79	79	79	79.7	6.7	402	42	444	5840	
10+00	2:25	77	81	79	79.0	8	480	43	523	5920	
9+00	2:29	78	77	82	78	7	420	45	465	5870	
8+00	2:32	78	78	78	78	7	420	46	466	5870	
7+00	2:35	75	79	76	76.7	5.7	342	48	390	5790	
6+00	2:39	76	80	79	78.3	7.7	462	49	511	5910	
5+00	2:42	81	75	79	78.3	7.3	438	51	489	5890	
4+00	2:45	80	77	82	79.7	8.7	522	52	574	5970	
3+00	2:52	77	75	79	77	6	360	54	414	5810	
2+00	2:55	79	77	80	78.7	7.7	462	55	517	5920	
1+00	2:59	79	75	74	76	5	300	57	357	5760	
0+00	3:03	78	76	80	78	7	420	58	478	5880	
B.S.I.	3:21	69	68	71	72	70.0	60	60	120	5520	

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
B.S. I	12:45				72.0						
0+00	1:01	78	79	81	79.3	7.3	438	4	440	5840	
1+00	1:05	73	76	77	75.3	3.3	198	8	210	5610	
2+00	1:09	72	74	76	76	4	240	12	250	5650	
3+00	1:13	73	76	79	76	4	240	16	260	5660	
4+00	1:17	81	81	81	81	9	540	20	560	5960	
5+00	1:22	78	78	79	78.3	6.3	378	24	400	5800	
6+00	1:25	77	76	79	77.3	5.3	318	28	350	5750	
7+00	1:28	77	77	78	77.3	5.3	318	32	350	5750	
8+00	1:32	82	75	81	79.3	7.3	438	36	470	5870	
9+00	1:36	82	81	81	81.3	9.3	558	40	600	6000	
10+00	1:41	78	78	78	78	6.0	360	44	400	5800	
11+00	1:45	80	78	79	79	7.0	420	48	470	5870	
12+00	1:50	76	74	77	75.7	3.7	222	52	270	5670	
13+00	1:54	80	80	82	80.7	8.7	522	56	580	5980	
14+00	1:58	77	78	75	76.7	4.7	282	60	340	5740	
15+00	2:02	78	80	80	78.7	6.7	402	60	340	5860	
B.S. I.					71.0	-1.0	-6	+60	460		

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
B.S. I	9:35				68.7						
1+00	10:12	82	83	84	83	14.3	858	-23	840	6340	Base of 100' hill
2+00	10:15	87	87	87	87	18.3	1098	-47	1051	6451	Middle of hill
3+00	10:20	87	90	86	87.7	19	1140	-70	1070	6470	Toe of 100' hill
4+00	10:26	94	90	88	90.7	22	1320	-94	1230	6630	cross creek @ 4+50 ft
5+00	10:31	87	90	93	90	21.3	1278	-117	1160	6560	low ground
6+00	10:38	83	86	82	83.7	15	900	-140	760	6160	Top of 25' hill
7+00	10:42	86	85	82	84.3	15.6	936	-164	770	6170	up slope
8+00	10:47	82	82	87	83.7	15	900	-187	710	6110	
9+00	10:53	85	87	86	86.0	17.3	1038	-211	830	6230	↳ hiway 9+25 N ↳ hiway 9+25 N
10+00	10:59	83	86	82	83.7	15.0	900	-234	670	6070	
11+00	10:03	89	86	86	87.0	18.3	1098	-257	840	6240	cross 0+00 @ 11+50 N
12+00	10:06	84	87	87	86.0	17.3	1038	-281	760	6160	
13+00	10:09	83	82	88	87.3	18.6	1116	-304	810	6210	
14+00	10:13	82	78	82	80.7	12	720	-328	390	5790	
15+00	10:17	86	87	87	86.7	18	1080	-351	730	6130	

Line 16 +00 N
Az. 70

B.S. I - 54008
Date: Oct 7/65

Inst: W. Ash
Ass't: C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	̂ X 60	Diurn.	Change	Value	Remarks
15+00	11:20	87	84	89	86.7	18	1080	-374	706	6110	
14+00	11:23	80	78	86	81.3	12.6	756	-398	358	5760	
13+00	11:27	84	90	81	85	16.3	978	-421	557	5960	
12+00	11:30	88	89	89	88.7	20	1200	-445	775	6180	cross line over Extended @ 11+80
B.S.I.	11:45				76.5	7.8	468	-468	—		
B.S.I.	12:45				78.0						
11+00	1:10	91	95	95	93.7	15.7	942	38	980	6380	
10+00	1:15	85	89	86	86.7	8.7	522	76	600	6000	
9+00	1:20	90	91	95	92	14	840	114	950	6350	Bottom of 40' hill
8+00	1:24	90	94	88	90.7	12.7	762	152	910	6310	cuts Survey line
7+00	1:27	94	93	97	94.7	14.7	882	190	1070	6470	
6+00	1:37	88	92	90	90	12	720	227	950	6350	
5+00	1:48	83	80	80	81	13	780	265	1040	6440	cross creek @ 4+50N
4+00	1:52	84	78	81	81	13	780	303	1080	6480	1/2 way up 20' hill
3+00	1:55	81	79	77	79	1	60	341	400	5800	brow of 70' hill
2+00	1:59	82	83	84	83	5	300	379	680	6080	
1+00	2:04	78	80	82	80	2	120	417	540	5940	
0+00	2:09	80	82	83	81.7	3.7	222	455	680	6080	

Line 20 +00 N
Az. 70

B.S.I - 54000
Date: Oct 7/65

Inst: W. ASH
Ass't: C/Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	̂ X 60	Diurn.	Change	Value	Remarks
1+00	2:20	76	77	77	76.7	-1.3	-78	493	420	5820	Bottom of 70' hill
2+00	2:24	83	80	83	82	+4	+240	531	770	6170	low ground
3+00	2:28	80	75	74	76.3	-1.7	-102	569	470	5870	cross creek @ 2+50N
4+00	2:35	70	70	72	71.7	-6.3	-378	606	230	5630	
5+00	2:42	73	73	68	70.7	-7.3	-438	644	210	5610	
6+00	2:49	71	72	72	71.7	-6.3	-378	682	300	5700	
7+00	2:56	71	76	66	71.0	-7.0	-420	720	300	5700	
8+00	3:02	78	73	76	75.7	-2.3	-138	758	620	6020	
9+00	3:08	76	70	72	72.7	-5.3	-318	796	480	5880	bottom of 50' hill
10+00	3:12	76	75	73	74.7	-3.3	-198	834	640	6040	
11+00	3:16	82	80	77	79.7	+1.7	+102	872	970	6370	
12+00	3:20	72	73	76	73.7	-4.3	-258	910	650	6050	
13+00	3:24	75	76	73	74.7	-3.3	-198	948	750	6150	
14+00	3:28	73	69	72	71.3	-6.7	-402	985	880	5980	
15+00	3:32	67	69	71	71.3	-6.7	-42	1023	620	6020	
B.S.I.	3:52	60	60	60	60.3	-17.7	-1062	1062			

Line 4+00 SE
Az. 135°

B.S. I - 54008

Date: Oct 7/8/65

Inst. W. Ash

Ass't. C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
B.S. I	3:52				60.3						
0+00	3:56	60	64	64	62.7	+2.4	144	75	219	5620	Within Park
1+00	4:00	62	64	63	63	2.7	162	150	310	5710	
2+00	4:08	64	63	65	64	3.7	222	225	450	5850	
3+00	4:16	60	64	67	63.7	3.4	204	300	504	5900	
4+00	4:24	61	67	63	63.7	3.4	204	375	580	5980	North side of hiway
5+00	4:28	60	60	61	60.3	0.0	0	450	450	5850	⊥ hiway
6+00	4:32	60	58	59	59	-1.3	-78	525	450	5850	
B.S. I	4:40				50.3	-10.0	-600	600	500		
B.S. I	9:30				61.7						
6+00	9:37	59	59	59	59	-2.7	-62	-5	-170	5230	650' top of 50' hill
7+00	9:44	66	66	64	65.3	3.6	+216	-10	+210	5610	
8+00	9:51	62	58	58	59.7	-2	-120	-15	-140	5260	
9+00	9:58	59	60	61	61	-1.7	-42	-20	-60	5340	
10+00	10:05	69	70	66	68.3	6.6	396	-25	370	5770	
11+00	10:12	66	65	67	66	4.3	258	-30	230	5630	
12+00	10:19	66	68	67	67	5.3	318	-35	280	5680	
13+00	10:26	64	65	66	65	3.3	198	-40	160	5560	top of 70' hill
14+00	10:33	70	70	69	69.7	8	480	-45	440	5840	
15+00	10:40	66	68	69	67.7	7	420	-50	370	5770	

Line

8+00 SE

B.S. I - 54000

Inst. W. ASH

Az. 135°

Date: Oct 8, 1965

Ass't. C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	Σ X 60	Diurn.	Change	Value	Remarks
15+00	10:50	66	68	70	68	6.3	378	-55	320	5720	578°E traverse (3250N - 1050W) 13+70 cross picketed
14+00	10:54	72	74	69	71.7	10	600	-60	540	5940	
13+00	10:58	70	68	69	69	7.3	438	-65	370	5770	
12+00	11:01	70	69	67	68.7	7	420	-70	350	5750	
11+00	11:04	70	75	72	73.7	12	720	-75	650	6050	top of 50' hill
10+00	11:07	79	78	78	78.3	16.6	996	-80	920	6320	⊥ hiway 10+25
9+00	11:11	68	68	70	68.7	7	420	-85	-40	5340	
8+00	11:14	69	67	66	67.3	5.6	336	-90	250	5650	Bottom 35' hill
7+00	11:18	64	66	69	66.3	4.6	276	-95	180	5580	
6+00	11:22	62	64	66	64	2.3	138	-100	40	5440	
5+00	11:26	65	63	67	65	3.3	198	-105	250 ⁹⁰	5490	top of 30' hill
4+00	11:31	68	72	68	69.7	8	480	-110	370	5770	
3+00	11:33	66	63	64	64.3	2.6	156	-115	40	5440	
2+00	11:35	63	63	65	63.7	2.3	138	-120	20	5420	
1+00	11:38	57	57	60	59.7	6.3	378	-125	253	5650	
0+00	11:40	58	59	61	59.7	-2	-120	-130	-250	5650	creek bottom bottom @ 1+00NW
B.S. I	11:45	64	64	64	64	2.3	138	-138			

Page 15
 Line 12+00 SE
 Az. 135°

B.S. I - 54008

Inst: W. Ash

Date: Oct 8, 1965

Ass't: C/Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	δX60	Diurn.	Change	Value	Remarks
B.S. I	12:56				64						
0+00	1:11	59	60	61	60	-4	-240	-9	-249	5150	cross creek 0+75
1+00	1:14	64	62	65	63.7	-3	-18	-17	-35	5370	Within Park
2+00	1:17	62	66	60	62.7	-1.3	-78	-26	-100	5300	
3+00	1:20	65	61	67	64.3	+3	18	-34	-16	5380	
4+00	1:23	64 ⁶⁷	63 ⁶³	65 ⁶²	64.7 ⁶⁴	0	—	-43	-43	5360	
5+00	1:26	64	65	65	64.7	.7	42	-51	-9	5390	Bottom 35' hill
6+00	1:29	67	63	63	64.3	.3	18	-60	-40	5360	top 35' hill
7+00	1:32	68	63	63	64.7	.7	42	-68	-26	5370	
8+00	1:35	63	60	59	60.3	-3.7	-222	-77	-299	5100	
9+00	1:38	71	66	68	68.3	4.3	258	-85	173	5570	
10+00	1:41	64	63	66	64.3	.3	18	-93	-75	5330	
11+00	1:44	66	65	65	65.3	1.3	78	-102	-24	5380	
12+00	1:47	63	64	65	64	0	0	-110	-110	5290	
13+00	1:50	65	65	66	65.3	1.3	78	-119	-41	5360	
14+00	1:53	66	64	66	65.3	1.3	78	-128	-50	5350	
15+00	1:57	68	71	69	69.3	5.3	318	-136	182	5580	North shoulder of highway

Line 16+00 SE

B.S. I - 54000

Inst: W. ASH

Az. 135° Az

Date: Oct 8, 1965

Ass't: C. Stanford

Page 16.

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	δX60	Diurn.	Change	Value	Remarks
15+00	2:05	60	59	62	60.3	-3.7	-222	-145	-367	5030	
14+00	2:08	68	67	69	68	4.0	240	-153	+87	5490	
13+00	2:10	64	67	64	65	1.0	60	-162	-100	5300	
12+00	2:13	67	68	70	68.3	4.3	258	-170	+88	5490	
11+00	2:15	70	68	69	69.0	5.0	300	-178	+120	5520	
10+00	2:18	60	63	65	62.7	-1.3	-78	-187	-270	5130	
9+00	2:20	70	72	73	71.7	7.7	462	-196	+270	5670	
8+00	2:23	75	73	74	74	10.0	600	-204	+400	5800	
7+00	2:26	66	67	67	66.7	2.7	162	-213	-50	5350	
6+00	2:29	67	66	66	66.3	2.3	138	-221	-80	5320	top of 150' hill
5+00	2:32	64	67	64	65	1.0	60	-229	-170	5230	
4+00	2:35	64	69	67	67	3	180	-238	-60	5340	
3+00	2:37	69	68	69	68.7	4.7	282	-246	+40	5440	
2+00	2:39	72	76	70	72.7	8.7	522	-255	+270	5670	
1+00	2:42	67	60	67	63.7	-3	-18	-264	-280	5120	
0+00	2:45	71	71	68	69.7	5.7	+342	-273	+350	5750	Cross creek @ 0+70
B.S. I	3:00				68.7	4.7	+282				

Line 4400 N W

Az. 315°

B.S. I - 54008

Date: Oct 12, 1965

Inst: W. Ash

Ass't: C/Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	̂X60	Diurn.	Change	Value	Remarks
B.S.I	9:37	63	62	67	66.3 64						
0+00	9:40	63	62	67	64	-2.3	-138	-1	-140	5260	
1+00	9:43	68	72	75	71.7	5.4	324	-2	+320	5720	
2+00	9:46	76	76	76	76	9.7	582	-3	+580	5980	
3+00	9:48	74	74	77	75	8.7	522	-4	520	5920	Base of 120' hill
4+00	9:50	77	77	77	77	10.7	642	-5	640	6040	
5+00	9:53	79	79	82	80	13.7	822	-4	820	6220	Brow of 120' hill 5+25
6+00	9:56	73	79	77	76.3	10	600	-8	590	5990	
7+00	9:59	74	78	80	77.3	11	660	-9	650	6050	
8+00	10:01	70	69	63	70.7	4.4	264	-11	250	5650	
9+00	10:03	74	78	79	76.7	10.4	624	-12	610	6010	
10+00	10:06	72	77	77	75.3	9	540	-14	530	5930	
11+00	10:09	71	68	75	71.3	5	300	-15	290	5690	
12+00	10:12	74	76	79	74.7	8.4	504	-16	480	5880	
13+00	10:13	68	74	71	71	4.7	282	-18	260	5660	
14+00	10:14	74	71	75	74	7.7	462	-19	440	5840	
15+00	10:16	74	74	73	73.7	7.4	444	-20	420	5820	

Line 8+00 N W

B.S. I - 54000

Inst: W. ASH

Az. 315°

Date: Oct 12/65

Ass't: C Stanford

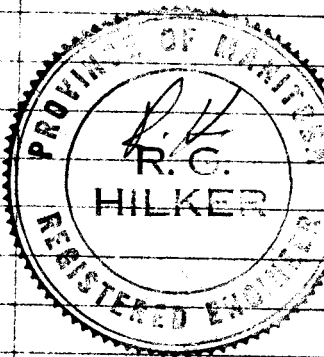
Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	̂X60	Diurn.	Change	Value	Remarks
15+00	10:20	74	77	75	75.3	9	540	-21	520	5920	
14+00	10:23	76	77	73	75.3	9	540	-23	520	5920	
13+00	10:25	77	77	78	77.3	11	660	-24	640	6040	
12+00	10:28	70	71	73	71.3	5	300	-25	380	5780	
11+00	10:30	75	77	75	75.7	9.4	564	-27	530	5930	
10+00	10:33	82	85	87	84.7	18.4	1104	-28	1080	6480	
9+00	10:36	74	69	72	71.7	5.4	324	-29	300	5700	
8+00	10:38	75	77	79	77	10.7	642	-31	610	6010	
7+00	10:41	76	84	79	80	13.7	822	-32	790	6190	
6+00	10:44	82	81	82	81.7	15.4	924	-33	890	6290	
5+00	10:46	80	81	78	79.7	13.4	804	-34	770	6170	
4+00	10:48	85	83	83	83.7	17.4	1044	-35	1010	6410	
3+00	10:53	78	79	81	79.3	13	780	-37	740	6140	top of 120' hill
2+00	10:58	84	83	78	81.7	15.4	924	-38	880	6280	@ 2440 W
1+00	11:02	72	71	72	71.7	5.4	324	-40	280	5680	
0+00	11:08	66	66	63	65	-1.3	-78	-41	30	5430	bottom of hill 0+00
B.S.I.	11:15				67	.7	+42	-42			

Page 19
 Line 12+00 NW
 Az. 315°

B.S. I - 54008
 Date: October 12/65

Inst: W. Ash
 Ass't: C. Stanford

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	° X 60	Diurn.	Change	Value	Remarks
B.S. I	12:13				69.0						
0+00	12:19	63	65	71	66.3	-2.7	-162	5	-160	5240	
1+00	12:21	71	76	76	74.3	5.3	318	+11	+330	5730	bottom 120' hill 12:50
2+00	12:24	78	82	80	80	11	660	16	+680	6080	
3+00	12:27	75	75	72	74	5	300	22	320	5720	top of 120' hill 3:23
4+00	12:30	77	76	74	75.7	6.7	402	27	430	5830	
5+00	12:33	73	73	75	73.7	4.7	282	33	320	5720	
6+00	12:36	80	78	78	78.7	9.7	582	38	620	6020	
7+00	12:39	72	76	77	75	6	360	44	400	5800	
8+00	12:42	73	78	77	76	7	420	49	370	5770	
9+00	12:45	75	78	80	77.7	8.7	522	55	580	5980	
10+00	12:48	77	73	77	75.7	6.7	402	60	460	5860	
11+00	12:51	70	77	77	74.7	5.7	342	66	410	5810	
12+00	12:54	77	73	72	74	5	300	71	370	5770	
13+00	12:57	76	76	73	75	6	360	77	440	5840	
14+00	1:00	75	77	77	76.7	7.7	462	82	540	5740	
15+00	1:04	74	74	77	75	6	360	88	450	5850	



Line 16+00 NW
 Az. 315°

B.S. I - 54000
 Date: Oct 12/65

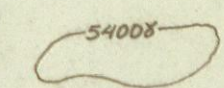
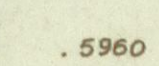
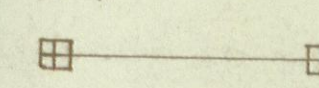
Inst: W. Ash
 Ass't: C. Stanford

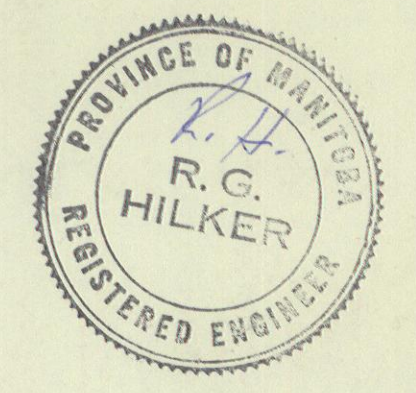
Page 20

Station	Time	R ₁	R ₂	R ₃	Av.	B.S. diff.	° X 60	Diurn.	Change	Value	Remarks
15+00	1:08	74	77	78	76.3	+7.3	438	93	530	5930	
14+00	1:12	77	75	76	75	6	360	99	460	5860	
13+00	1:16	77	81	83	80.3	11.3	678	105	780	6180	
12+00	1:20	76	76	81	77.7	8.3	498	110	610	6010	
11+00	1:24	77	77	77	77	8	480	115	600	6000	
10+00	1:28	80	81	81	80.7	11.7	702	121	820	6220	
9+00	1:30	74	72	76	74	5	300	125	430	5830	
8+00	1:33	82	83	81	81	12	720	132	852	6250	
7+00	1:36	80	83	85	82.7	13.7	822	137	960	6360	top of 120' hill 6:40
6+00	1:39	76	75	77	76	7	420	143	560	5960	along side hill
5+00	1:42	74	79	79	77.3	8.3	498	149	650	6050	
4+00	1:45	71	74	75	73.3	4.3	258	154	410	5810	on down hill
3+00	1:48	74	74	77	75.7	6.7	402	160	560	5960	Bottom of 120' hill
2+00	1:50	74	76	75	75	6	360	165	530	5930	
1+00	1:53	69	68	71	69.7	7	42	170	210	5610	
0+00	1:57	68	67	65	66.7	-2.3	-138	176	40	5540	
B.S. I	2:10				66.0	-3.0	-180	180	-		

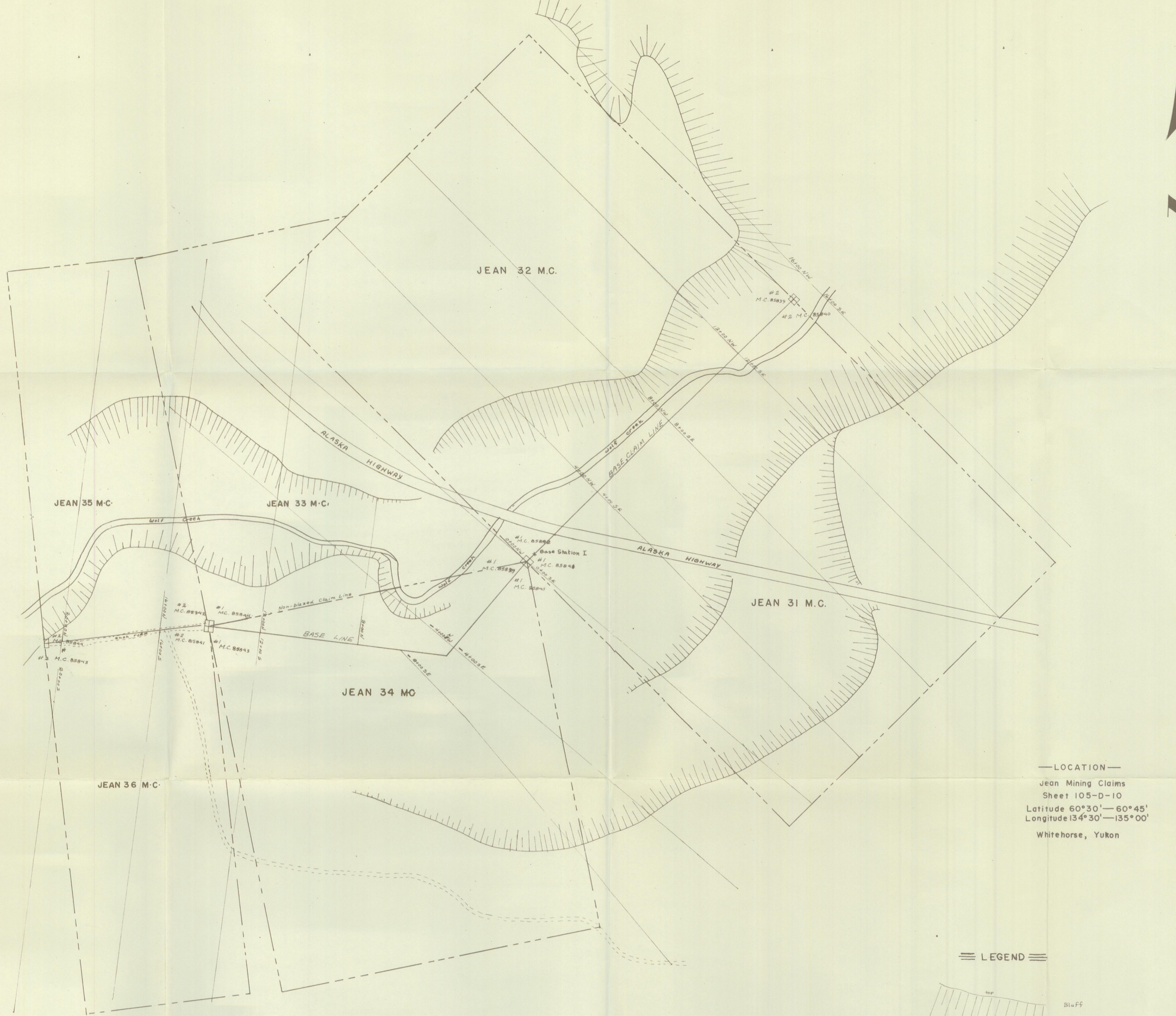


— LOCATION —
 Jean Mining Claims
 Sheet 105-D-10
 Lat. 60°30' - 60°45'
 Long. 134°30' - 135°00'
 Whitehorse, Yukon

— LEGEND —
 Magnetic Contour 
 Magnetometer Station —
 gammas of intensity,
 vertical magnetic
 component measured 
 Claim line and Posts 



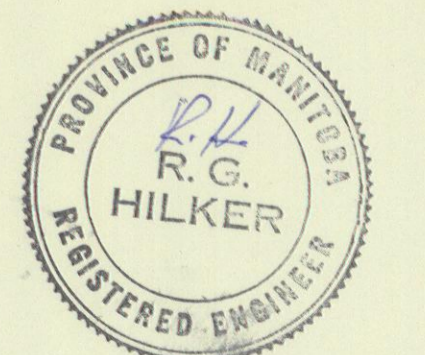
NEW IMPERIAL MINES LTD.	
Copper Belt	Whitehorse Y.T.
MAGNETOMETER SURVEY JEAN M.C. (WOLF CREEK)	
Scale 1" = 200'	Date: Oct. 18/45
Drawn by: <i>H.A.H.</i>	Rev.



— LOCATION —
 Jean Mining Claims
 Sheet 105-D-10
 Latitude 60°30'—60°45'
 Longitude 134°30'—135°00'
 Whitehorse, Yukon

== LEGEND ==

- Bluff
- claim boundary lines
- bush road
- 4 claim posts
- 2 claim posts



NEW IMPERIAL MINES LTD.	
Copper Belt	Whitehorse Y.T.
LOCATION PLAN MAGNETOMER SURVEY	
JEAN M.C. (WOLF CREEK)	
Scale: 1" = 200'	Date: October 17, 1965
Drawn by: W. Clark	Rev.