COMPANY: Goldstream - Titan
PROJECT: Hugo RL 8810
HOLE NUMBER: HS 11

Commenced:	18 October 96
Completed:	26 October 96
Logged By:	L A Newnham
Drilled By:	Dia. Drill Tas

Purpose of Hole
.to test the Hugo Skarn between

Comments on Completion

Collar Details

Grid	Northing	Easting	Elevation	Dip	Bearing
AMG	5406217	423 693	625	- 90	-

Length (m)
135.0

Hole Size	
To (m)	Size
59.6	HQ
135.0	NQ

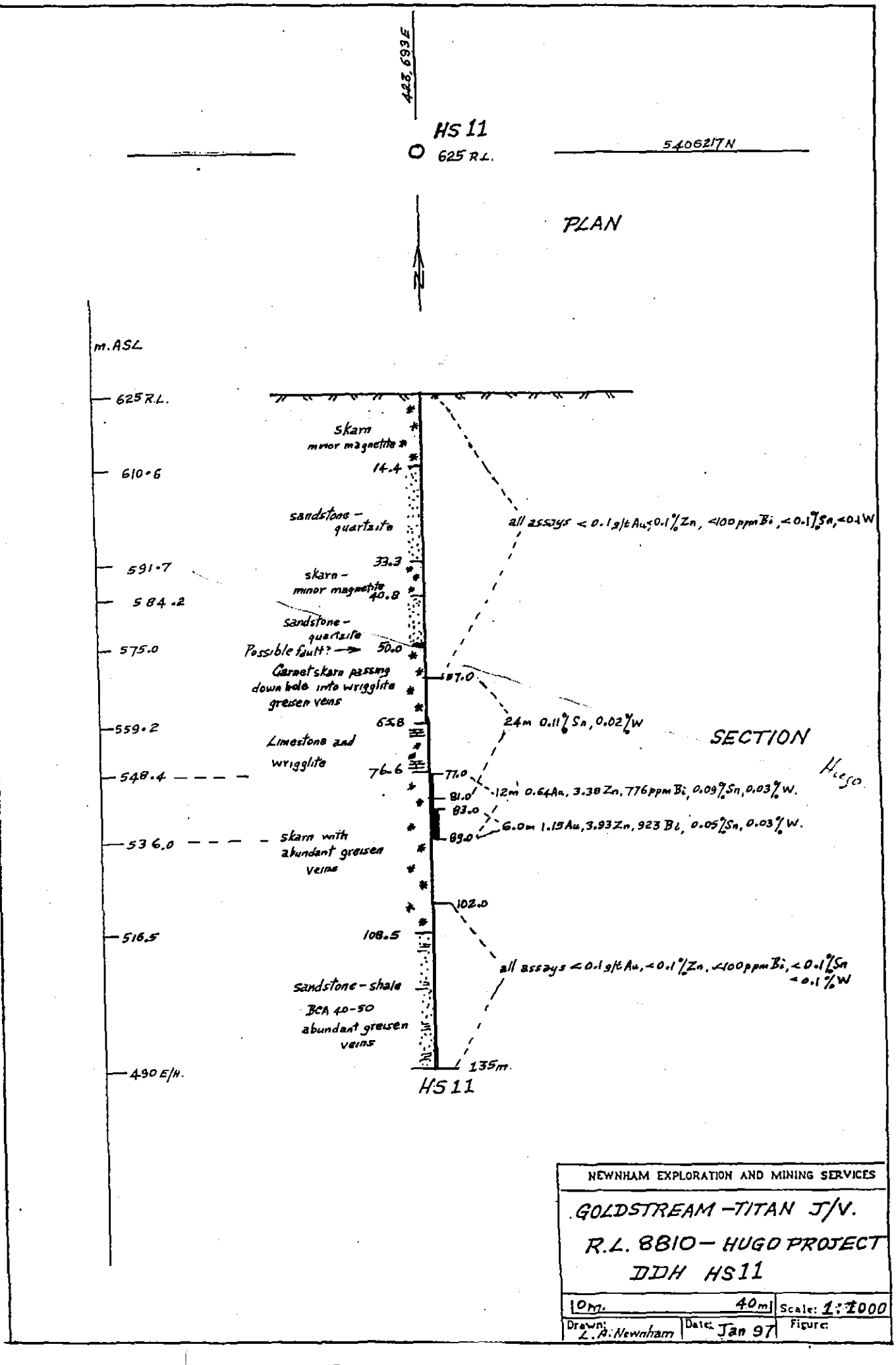
Significant Core Loss Zones		
From	To	%Rec.
0.0	2.0	50
2.0	5.0	60

Hole Condition on Completion
.HQ rods stuck in hole: backed them off at 36 m; thus HQ remains in hole from 36 - 59.6 m;

Summary of Results:

Depth		Recovery	Description	Assays							
From	To	%		Length	Au	Zn	As	Mo	Bi	Sn	W
77.0	89.0	100	skarn with abundant greisen veins	12.0m	0.64	3.38	86	11	776	866	311
83.0	89.0	100		6.0 m	1.15	3.93	9	14	923	515	347
57.0	81.0	100	wrigglite with limestone (closer to 0.2 Sn if limestone beds omitted)	24.0 m						1098	205

265049



NEWNHAM EXPLORATION AND MINING SERVICES

GOLDSTREAM – TITAN J/V.

R.L. 8810 – HUGO PROJECT

DDH HS11

10m.	40m	Scale: 1:1000
Drawn: Z.A. Newnham	Date: Jan 97	Figure:

5 cm

DOWN HOLE SURVEY DATA

COMPANY: Goldstream - Titan
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Depth	Dip	Bearing	Interval		Length	Vertical Distance		Horizontal Distance		Co-ordinates			
(m)		(AMG)	From	To	(D)	D.sin dip	R.L.	D. cos dip (HD)	Cumulative HD	N. distance HD. cos brg.	N. co-ordinate	E. distance HD. sin brg.	E. co-ordinate
COLLAR	-90	0					625.00		0.00		5,406,217.0		423,693.0
0	-90	0	0	25	25	25.00	600.00	0.00	0.00	0.00	5,406,217.0	0.00	423,693.0
50	-88.5	309	25	75	50	49.98	550.02	1.31	1.31	0.82	5,406,217.8	-1.02	423,692.0
100	-88.5	299	75	117.5	42.5	42.49	507.53	1.11	2.42	0.54	5,406,218.4	-0.97	423,691.0
135	-88.8	120	117.5	135	17.5	17.50	490.04	0.37	2.79	-0.18	5,406,218.2	0.32	423,691.3
135													

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Description			Core Recovery			RQD			Assays							
From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.0.0	14.4	**.SKARN:**														
		mottled pink-dark gray/green granular garnet	0	2	50				0.0	2.0	0.02	0.03	1.5	5	195	<5
		skarn with garnets up to 2 mm.forming large	2	5	60				2.0	3.0	0.03	0.03	<0.5	4	750	<5
		degraded/weathered aggregates,separated by	5	8	90				3.0	4.0	0.04	0.02	<0.5	<1	59	30
		dark gray mineral;	8	11	100				4.0	5.0	0.03	0.02	<0.5	<1	410	<5
		translucent interstitial fluorite common;	11	14	80						0.01(dup)					
		thin dark gray-black greisen veins 70-80 CA							5.0	6.0	0.03	0.01	<0.5	9	290	<5
		common, often with narrow magnetite							6.0	7.0	0.02	0.02	<0.5	1	900	<5
		selvages either side of fluorite-quartz cores;							7.0	8.0	0.02	0.03	1	<1	440	<5
		minor light brown-pink skarn zones eg. 7-8 m;									<0.01 (dup)					
		below 11.0 m: becomes more siliceous, light							8.0	9.0	0.02	0.02	<0.5	<1	380	<5
		green-gray calc-silicates, interbedded with							9.0	10.0	<0.01	0.02	<0.5	2	390	<5
		altered sandstone?;							10.0	11.0	0.03	0.01	<0.5	10	22	<5
		minor disseminated soft silvery mineral,							11.0	12.0	0.02	0.01	<0.5	5	58	<5
		possibly molybdenite, pervasive from collar							12.0	13.0	0.03	0.01	<0.5	22	95	<5
		down, as grains up to 1 mm.;							13.0	14.0	0.01	0.04	1.5	<1	310	<5
		fluorite patches ocassionally associated with														
		massive pyrite, but overall only minor							14.0	15.0	0.04	0.02	<0.5	2	11	<5
		amounts;							15.0	16.0	0.03	0.01	<0.5	8	7	<5
		core generally solid and competent, but							16.0	17.0	0.02	0.01	<0.5	8	43	5
		becoming very broken below 12.5 m;							20.0	21.0	0.01	0.08	0.5	16	6	10
14.4	33.3	**SANDSTONE-QUARTZITE:**														
									26.0	27.0	0.02	<0.01	<0.5	7	6	10
		intensely silicified sandstone and minor	14	31.7	100											
		siltstone; massive white-light gray quartzite	31.7	33.7	80				31.0	32.0	<0.01	<0.01	<0.5	6	7	<5
		for most part, with all original texture														
		obliterated; gritty sandy sections pyritic with							33.0	34.0	0.05	0.04	<0.5	<1	<1	<5
		sericitisation of felspathic groundmass;														
		gradational contact with unit above but very														
		sharp contact with unit below;														
		minor greisen veins with magnetite selvages														
		and trace molybdenite near top of interval;														
		interval very brokenwith abundant brittle														
		fracturing and failure along several joint														
		directions; most joint surfaces limonitic;														
33.3	40.8	**SKARN:**														
		33.3-35.0 m: dark green-dark gray mottled	33.7	35.0	95				34.0	35.0	0.04	0.04	<0.5	<1	<1	<5
		skarn with magnetite patches and trace	35.0	38.0	70				35.0	36.0	0.03	0.01	<0.5	3	9	<5
		amounts fine silvery mineral ? hematite;	38.0	41.0	70				36.0	37.0	0.01	0.02	6	380	110	10

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From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
.33.3 cont.....	40.8	.35.0-40.8m: pink-light brown saccharoidal skarn, intensely weathered, leached and disaggregated; generally extremely broken; sandy 36-37m; yellow-buff brown pug 38.8-40.8m; *sharp contact with unit below;*							37.0	38.0	0.02	<0.01	<0.5	11	24	<5
									38.0	39.0	0.02	<0.01	<0.5	4	24	<5
									39.0	41.0	0.02	0.01	0.5	44	260	<5
40.8	50.0	**SANDSTONE-QUARTZITE:**							41.0	42.0	0.01	0.02	1	29	9	5
			41.0	44.0	90						0.01 (dup)					
		light gray intensely silicified sandstone-siltstone-quartzite unit similar to 14.4-33.3m; pyritic; trace fine grains metallic mineral; interval fractured along limonitic and sericitic coated joint surfaces, 30 and 70 CA; very broken rubbly contact with unit below- *POSSIBLE FAULT;*	44.0	49.9	100				49.0	50.0	<0.01	<0.01	<0.5	8	5	<5
50.0	65.8	**SKARN:**	49.9	52.9	85				50.0	51.0	0.01	0.02	<0.5	25	18	20
			52.9	65.8	100				51.0	52.0	0.01	0.02	<0.5	11	100	<5
		50.0-57.4: light gray-light brown-pink garnet skarn; 50-52.4 m., very weathered / leached clayey and broken rubble, bright red coloring in places due to weathering of Fe amphibole/ pyroxene; competent below 52.4 m. with blotchy texture due to small patches of dark green amphibole or pyroxene; **below 53.5 m.**, abundant greisen veins, consisting of dark gray-black magnetite commonly with pink felspar - quartz centres; veins 1-20 mm. width and generally 70-80 CA; veins make up over 50% of rock; REDUCED TO NQ AT 59.6 m; **57.4-65.8 m:** wrigglite; magnetite fluorite skarn with classic wrigglite texture; highly magnetic and competent core; cut by ocassional pink felspar veins 60-70 CA, *2-10 mm. thick;*							52.0	53.0	<0.01	0.02	0.5	3	2	<5
									53.0	54.0	0.07	0.02	0.5	10	5	70
									54.0	55.0	0.02	0.01	0.5	7	7	15
									55.0	56.0	<0.01	0.01	0.5	3	2	5
									56.0	57.0	<0.01	0.01	<0.5	4	2	10
									57.0	58.0	0.04	0.54	2	51	2	650
											0.03(dup)					
									58.0	59.0	0.02	0.06	1.5	87	2	500
									59.0	60.0	0.1	0.07	1.5	340	3	900
									60.0	61.0	0.25	0.63	2.5	200	2	1200
									61.0	62.0	0.08	0.09	2	140	1	700
									62.0	63.0	0.1	0.43	2	320	3	900
									63.0	64.0	0.1	0.04	1.5	165	2	700
									64.0	65.0	0.1	0.03	1.5	280	2	700
									65.0	66.0	0.08	0.16	1.5	230	2	550
65.8	76.6	**LIMESTONE WITH WRIGGLITE BEDS:**	65.8	76.6	100				66.0	67.0	0.01	0.03	<0.5	50	2	15
		65.8-71.0 m: medium gray massive limestone with mottled texture in places;									<0.01(dup)					
									67.0	68.0	<0.01	0.01	<0.5	29	<1	15

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From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
65.8	76.6	.minor fine grained magnetite veinlets < 1mm.							68.0	69.0	<0.01	<0.01	<0.5	33	2	10
cont....		increasing in abundance towards base of									0.03(dup)					
		interval;							69.0	70.0	0.01	0.01	<0.5	38	1	10
		71.0-73.2 m: zone of intermixed limestone							70.0	71.0	<0.01	0.04	<0.5	150	1	40
		and wrigglite; limestone cream-white-light							71.0	72.0	<0.01	0.08	1	650	3	380
		gray;							72.0	73.0	0.04	0.09	1.5	450	1	600
		73.2-76.6 m: intermixed limestone, pale							73.0	74.0	0.02	0.08	<0.5	160	2	250
		green-pink skarn, and minor wrigglite patches;							74.0	75.0	0.02	0.47	1.5	550	1	700
76.6	108.5								75.0	76.0	0.01	0.12	0.5	270	2	390
		SKARN WITH ABUNDANT GREISEN VEINS:	76.6	108.5	100				76.0	77.0	<0.01	0.16	<0.5	145	2	300
		light green-honey colored skarn with patches														
		magnetite and sphalerite - close to wrigglite							77.0	78.0	<0.1	1.14	1	350	2	290
		texture in places;							78.0	79.0	0.04	3.38	2	290	2	490
		cut by abundant thin 1-2 mm greisen veins of							79.0	80.0	0.02	10.4	2.5	99	10	950
		magnetite, dark biotite, generally 50 CA;							80.0	81.0	0.19	0.2	2.5	84	4	1400
		greisen veins and skarn cut by 5-15 mm.							81.0	82.0	0.40	0.32	1.5	120	19	470
		bright pink felspar veins 30 CA;							82.0	83.0	0.16	1.56	1.5	35	11	180
		these in turn are fractured with fractures							83.0	84.0	0.96	4.03	1.5	14	22	450
		infilled with a soft red-pink mineral;									1.02(dup)					
		up to 87 m: dominated by magnetite-							84.0	85.0	2.00	5.77	1.5	14	8	1550
		sphalerite skarn, either as intervals of classic									1.99(dup)					
		wrigglite or light brown-cream skarn with							85.0	86.0	0.31	0.33	1	6	10	140
		patches of massive magnetite-pyrite-pyrrhotite							86.0	87.0	0.86	5.7	2	8	23	1450
		and abundant magnetite greisen veins;									0.92(dup)					
		pink felspar veins common, generally 70-80							87.0	88.0	1.40	6.15	1.5	8	7	1300
		CA;									1.33(dup)					
		below 87 m: skarn grades into light pink							88.0	89.0	1.39	1.65	1.5	4	16	650
		garnet skarn with decreasing magnetite;									1.12(dup)					
		87-96.2 m: pink saccharoidal textured skarn							89.0	90.0	0.08	0.06	1	1	4	40
		with numerous magnetite-sphalerite patches							90.0	91.0	0.05	0.02	0.5	2	3	25
		and widely spaced greisen veins with quartz-							91.0	92.0	0.96	0.03	1	3	4	180
		fluorite cores and pink felspar - magnetite									1.10(dup)					
		rims;							92.0	93.0	0.70	0.33	1	7	3	175
		96.2-98.5 m: fine grained pink skarn with									0.72(dup)					
		magnetite restricted to network fine quartz-							93.0	94.0	0.12	3.43	1	14	5	30
		topaz?-fluorite-magnetite veinlets;							94.0	95.0	0.05	0.03	1	8	14	5
		98.5-108.5 m: light green-pink fine grained							95.0	96.0	0.02	0.02	1	17	5	30
		garnet skarn with abundant magnetite-							96.0	97.0	0.02	0.08	1	3	4	10
		sphalerite in skarn and in numerous quartz-							97.0	98.0	<0.01	0.01	0.5	13	4	20
		topaz?-pink fluorite-magnetite greisen veins;							98.0	99.0	0.01	0.01	0.5	9	8	10
		minor specs metallic mineral in greisen														
		veinlets;														

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From	To		From	To	%	From	To	%	From	To	Au	Zn	Ag	As	Mo	Bi
			A	B	C	D	E	F	G	H	I	J	K	L	M	N
.76.6	108.5	.base of interval gradational;							99.0	100.0	<0.01	0.08	<0.5	39	5	40
cont....	....	fine light-brown siltstone-shale beds first							100.0	101.0	3.16	0.93	1	88	15	600
		appear 107.8 m.									2.63(dup)					
108.5	135.0	**SANDSTONE-SHALE with greisen veining:**							101.0	102.0	0.53	0.02	1	23	18	85
											0.69(dup)					
		fine-medium grained dark gray sandstone with	108.5	135	100				102.0	103.0	0.09	0.01	<0.5	34	11	55
		minor beds of light brown whispy siltstone-shale;							103.0	104.0	0.01	0.02	<0.5	5	6	5
		unit intensely altered and hornfelsed;							104.0	105.0	<0.01	0.01	<0.5	7	5	<5
		abundant 1-10 mm. greisen veins 60-70 CA,							105.0	106.0	<0.01	0.01	<0.5	5	5	15
		variable composition: quartz-topaz?-mica							106.0	107.0	<0.01	0.01	<0.5	5	4	5
		(green and white) centres with dark mica-magnetite margins;							107.0	108.0	<0.01	0.01	<0.5	8	4	15
		pervasive greenish coloration in places and							108.0	109.0	<0.01	0.01	<0.5	7	10	10
		minor disseminated magnetite in sandstone;									0.04(dup)					
		BCA 40-50;									Sn	W				
		pervasive 1-3% pyrite as clots in sandstone							0.0	2.0	110	20				
		and in most of greisen veins;							2.0	3.0	130	<10				
		trace Bi, Mo and Wolframite? in greisen veins,							3.0	4.0	165	20				
		especially in thicker veins below 123 m;							4.0	5.0	165	<10				
		core moderately competent but several very							5.0	6.0	220	15				
		broken zones associated with fracturing along							6.0	7.0	220	30				
		greisen veins;							7.0	8.0	270	<10				
									8.0	9.0	180	10				
		END OF HOLE							9.0	10.0	220	45				
									10.0	11.0	370	120				
									11.0	12.0	48	<10				
									12.0	13.0	74	15				
									13.0	14.0	200	25				
									14.0	15.0	145	25				
									15.0	16.0	13	<10				
									16.0	17.0	45	30				
									20.0	21.0	<4	<10				
									26.0	27.0	17	20				
									31.0	32.0	5	<10				
									33.0	34.0	220	25				
									34.0	35.0	220	15				
									35.0	36.0	400	155				
									36.0	37.0	310	90				
									37.0	38.0	360	30				

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From	To		From	To	%	From	To	%

Assays							
From	To	Sn	W				
38.0	39.0	400	20				
39.0	41.0	360	60	From	To	Sn	W
41.0	42.0	10	10	85.0	86.0	600	490
49.0	50.0	11	25	86.0	87.0	450	500
50.0	51.0	130	115	87.0	88.0	470	170
51.0	52.0	600	80	88.0	89.0	600	390
52.0	53.0	650	100	89.0	90.0	550	140
53.0	54.0	750	230	90.0	91.0	550	70
54.0	55.0	370	95	91.0	92.0	600	165
55.0	56.0	450	70	92.0	93.0	550	55
56.0	57.0	650	270	93.0	94.0	550	55
57.0	58.0	2250	320	94.0	95.0	600	220
58.0	59.0	1700	420	95.0	96.0	550	165
59.0	60.0	1450	490	96.0	97.0	550	115
60.0	61.0	2400	380	97.0	98.0	650	140
61.0	62.0	1550	430	98.0	99.0	650	480
62.0	63.0	1250	600	99.0	100.0	450	115
63.0	64.0	1100	500	100.0	101.0	500	165
64.0	65.0	1050	500	101.0	102.0	500	280
65.0	66.0	700	550	102.0	103.0	550	145
66.0	67.0	33	<10	103.0	104.0	430	290
67.0	68.0	23	<10	104.0	105.0	390	290
68.0	69.0	20	10	105.0	106.0	440	240
69.0	70.0	43	<10	106.0	107.0	400	125
70.0	71.0	200	40	107.0	108.0	150	105
71.0	72.0	850	310	108.0	109.0	72	95
72.0	73.0	1150	185				
73.0	74.0	240	45				
74.0	75.0	1900	20				
75.0	76.0	600	80				
76.0	77.0	1500	<10				
77.0	78.0	1750	85				
78.0	79.0	1150	200				
79.0	80.0	2450	500				
80.0	81.0	1000	310				
81.0	82.0	500	340				
82.0	83.0	460	220				
83.0	84.0	500	350				
84.0	85.0	470	185				