60002524

Mining District File Summary Sheet

DISTRICT	Battle Mountain
DIST_NO	0480
COUNTY If different from written on document	Lander
TITLE If not obvious	Hughes Tool Co. Mining Papers Group 32 S Drill Log
AUTHOR	Smith R, Holmes D, Miller B
DATE OF DOC(S)	1974
MULTI_DIST Y / N? Additional Dist_Nos:	
QUAD_NAME	Antler Peak 15'
P_M_C_NAME (mine, claim & company names)	Hughes Tool Co.; Roger Smith Drilling; Summa Corp.; Toledo Mines Co.
COMMODITY If not obvious	Copper
NOTES	Geology; drill logs; daily driller's sheets; handwritten notes; correspondence; receipts; Note: Scan folder front 88 p. 1 oversized sheet

Keep docs at about 250 pages if no oversized maps attached (for every 1 oversized page (>11x17) with text reduce the amount of pages by ~25)

	Initials	Date
SS:	DB	12/23/08
DB:		
SCANNED:	MO	1.13.10

Revised: 1/22/08

Group 32-3-74 - Drill Log 120
Roger Smith

HUGHES TOOL CO. 120
MINING PAPERS
GROUP 32 S DRILL LOG, SMITH

6000 2524 00480

6009 2524 0480 0480

Elevation: _____
Total Depth: _____
Date Begun: May 20, 1974
Date Finished: August 1974
Location: Battle Mountain

SUMMA CORPORATION

GEOLOGIC LOG

Logged by: RLL-FS
Drilling Company: ROGER SMITH
Cased: TO 388
Hole Size: NX,

Project 32 - BATTLE MTN. Drill Hole 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERAL IZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
0-388	--	--	Rotary through Basalt into Qtzite.	--	--	--	-	-	-	-	-	-
388-390	90%	(Qtzite, Conglometatic	From 388 to 613: Quartzite, Fine-Med. gr, Lt grey, massive, Sl-mod Fractured. Occ. Facies changes to silty units, conglometatic, to v. fine grained, occ Sl. Carbonate in Matrix. ± 1% Pyrite, mostly as fine dissem. grains and occ 1-2mm veinlets w/Py, qtz. ± 40° common. Rare Tr. MoS_2 w/Tr Cpy. Alt very weak in the Qtzite, Occ Tr-epid. Possibly 2nd Biotite in Py/Qtz. veinlets.	Weak Propylitic	± 1% Py Rare Tr Mo/Cpy		180					
390-398	100%	Same w/Congl.	As above, congl. unit 394-396, occ oxidized Vnlets, w/ Limonite and occ. botryoidal Lt. colored Min. (?) (Zeolite)	Same	Same							
398-407.6	100%	Same	Same rock w/coarser gr. Qtzite - congl. clasts ± 2-3 mm. Rock sl. Vuggy w/Py and clay (?) in vugs.	Same	± 1%		250					

PROJECT: 32-BATTLE MOUNTAIN HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
407.6-410.3	100%	Same	Same Qtzite, conglomeratic. w/ a 2' zone 412-414 of Py veinlets w/vuggy	Same	1% Py		400					
410.3-416.6	100%	Same	Texture w/rare Tr covellite-cpy.	Same	± 1% Py Tr cov./cov.							
416.6-420	100%	Same	Same unit w/ F.gr Qtzite at 419 w/fine dissem py. 3mm 40° Qtz-Py veinlet w/Tr Sphalerite, calcite, Cpy,Mo.	Same	± .5% Py Tr Zn,Mo.		350					
420-426	100%	Same	Same to 427, then Cong. Qtzite as above Tr Cpy along Py-Qtz Veinlets.	Same	± .5% Py Tr Cpy							
426-429.6	100%	Same	Same Qtzite unit as above w/local congl. units. (±3mm clasts) 50'Py V.	Weak Prop. (?)	± .5% Py		180					
429.6-430	100%	Same	Same	Tr Chlor	" "							
430-435.6	100%	Same	430-438, Silty unit, w/occ. Py veinlets w/bleached haloe effect.	Weak Prop.	± 1% Py							
435.6-439.6	100%	Same	Same rock. w/occ Py-Qtz Veinlets rare Tr Sericite Fr.	Prop./TR seric.	± 1% Py Tr Cpy							
429.6-445	100%	Same rock	Same rock - Tr Mo.	Prop.	± 1% py Rare Tr cpy,tr mo		?					
445-446	100%	Same	Same, 50° Py/Qtz hairline veinlets	Same	± .5% Py							

PROJECT: 32 Battle Mountain HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
446-450	100%	Same	449-454, a zone of Str Py Min. + 20% ± .5% cpy.	Same	± 20% Py		670					
450-453	100%	Same *Petro	(Zone of PY)	Epizonal Same	.5% Py							
453-456	95%	Same	Same, Mod-strg Fr zone.	Same	±.5% Py							
456-461	100%	Same	Same, F.gr, Hairline Cpy/ Born. Vein.	Same	± 1% Py		120					
461-463	100%	Same	Same as above, sl Py inc. locally.	Same	± 2% Py Tr cpy.							
463-464	100%	Quartzite w/Local congl + silty units.	Same as above	Weak Prop.	± .5% Py							
464-465.3	100%	Same	Same, w/occ. Black Platy Min (?)	Weak Prop.	Same		110					
465.3-469	100%	Same	Same Qtzite, sl. vuggy. Strg Br.	Weak Prop.	.5% Py							
469-471	100%	Same	Same, silty, strg Br	Weak Prop.	.5% Py							
471-472	75%	Same	Same, sl. inc Py on Frs + Veinlets	Weak Prop.	±1% Py							
472-472.6	100%	Same	Same, strg Broken , inc Py on Frs.	Weak Prop.	±3% Py							
472.6-473.6	100%	Same	Same w/ occ Hairline Py w/ alt bleached Haloe. ± 40° to Core	Wk sericite (?)	± 2% Py		140					

32-3-74 557'

The original rock was a sandstone but it is more poorly sorted and arkosic than at 453'. Plagioclase appears to have been notably more abundant than K-spar. There are also more heavy accessories, notably sphene. The rock has been epizonally altered.

Quartz has grown, coalescing along smooth to complex mutual boundaries. Plagioclase is mostly fresh although it is clouded with montmorillonite and kaolin. Even sphene has recrystallized as spongy blebby aggregates. Orthoclase has been wholly replaced by granular ankerite; ankerite also occurs in large patches closely associated with pyrite anhedra. Late fractures are filled with stilbite. A broad vein of coarse anisotropic garnet cuts the bedding and is probably contemporaneous with alteration.

Mineral percentages are estimated as: quartz 60%, plagioclase 16%, montmorillonite 2%, stilbite 0.5%, pyrite 8%, ankerite 6%, apatite 1%, kaolin 1%, sphene 3%, xenotime tr., sericite tr., garnet 2%, chalcopyrite 0.5%.

32-3-74 453'

The original rock was a sandstone, a well-sorted unit composed primarily of rounded quartz with accessory K-spar and plagioclase. Zircon and apatite occur sparingly as heavy accessories. The rock has been epizonally altered and mineralized.

Quartz has grown and coalesces along smooth mutual boundaries. Large pyrite anhedra fill interstitial areas. Plagioclase is altered wholly to sericite that, in turn, has mostly retrogressed to coarse scaly kaolin. Large anhedra of ankerite replace, partly or completely, the orthoclase present.

Minerals appear in the following estimated amounts: quartz 54%, sericite 3%, kaolin 6%, ankerite 12%, pyrite 20%, apatite tr., zircon tr. orthoclase 4%, chalcopyrite 1%.

Continued Sheet No. 4

PROJECT: 32 Battle Mtn. HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
473.6-476	100%	Same	Same	Same	± 1% Py							
476-479	100%	Same	Same w/alt. Haloes along Hairline Py veinlets (Sl argillic alt)	Argillic along veining	± 2% Py							
479-481.3	100%	Same	Same	Same	± 1% Py							
481.3-484	100%	Same	Same	Same								
484-486	100%	Same	Same, less veining w/alt.		± .5% Py							
486-487	100% (+)	Same	Same Qtzite as above, No alt veining	Same	± .5% Py							
487-489	100%	Qtzite X	Same as above, 1cm vein @ 488.7 w/qtz-Py-Calcite, Cpy and Tetrahedrite (?)	Wk Prop (?)	± .5% Py Tr Cpy, Tetr.		280					
489-490	100%	Same	Same	Wk Prop (?)	.5% Py							
490-491.6	90%	Same	Same, strg Br. w/greenish clays	Same								
491.6-495.6	100%	Same	Same rock w/inc Py. as tiny veinings.	Same	± 5% Py		330					
495-498	100%	Same	Same w/occ. 60° Py-Qtz. Hair-line vn's.	Same	± 2% Py							
498-498.5	100%	Same	Same	Same	± 1% Py							
498.5-499	100%	Same	Same rock, strg Br	Same	± 1% Py							

Continued Sheet No. 5

PROJECT: 32 Battle Mtn. HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
499-501	50%	Same	Same, cave, Strg Br. More Cong.	Same	Same							
501-502.6	60%	Same	Same rock	Same	Same							
502.6-503	50%	Same	Same rock	Same	Same							
503-503.6	70%	Same	Same rock strg. fr. w/ Pyrite infractures. Hairline fract.	Same	Pyrite 5%		140					
503.6-504.6	100%	Same	Same	Same	Pyrite 5%							
504.6-507	60%	Same	Same except Pyrite in blebbs less than before	Same	± 1% Py.							
507-509	50%	Same	Same strg. Br., 6" Argillite lens.									
509-512	70%	Qtzite	Same, Strg. broken, inc. Py	Prop.	± 3% Py Tr Cpy							
512-514	50%	Same	Same but Sl argillitic w/ Alt. borders along Py Hairline Vns. and blebs.	Prop.	± 1% Py		270					
514-515.5	60%	Same	Same	Same	± 2% Py							
515.5-522	50%	Same	Same argillite w/alt. vein selvedges to 522 then conglometatic Qtzite. Occ. Py grains w/ Biotite (?).	Same	± 1% Py Tr Cpy							
522-529	100%	Same	Same Qtzite, F. gr. decrease in sulfide		± .5% Py		700					

PROJECT: 32 Battle Mtn. HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
529-539	100% (Boxdropped)	Same	Same Qtzite, Strg. Br locally ½" vein 60' w/ Qtz.-calcite. Py-Cpy- Adularia	Tr Sericite	± 1% Py 1% Cpy		1100 .1%					
539-540	100%	Same	Same, Sc inc. Py	--	2% Py		500					
540-549?	100%	Same	Same, 541 to 543 Argillite 40° contact. dissem Py. Qtzite w/ ± 5% Py w/ ± .5% Cpy. dissem.	Prop(?)								
549-555	100%	Same	Same Qtzite as above w/ occ. 40° Py-Biot(?) Hairline vnlets. Inc. Py ± 5%	Prop(?) possibl. 2nd Biot(?)	± 5% Py ± .5% Cpy		480					
555-559	100%	X Qtzite w/occ Argillite/ siltstone units. * Petro	Qtzite as above. Siltstone w/ 45° contact. Pinkish color w/ ± 50° bedding sl. offset. V. fine gr. dissem. Py along zones. ± 3% rare Tr Cpy. at 558 occ. blebs cpy. w/ black Biot.(?)	Tr chlor Tr 2nd Biot?	± 3% Py .5% Cpy							
559-561.5	100%	Same	Same siltstone unit to 561. then Qtzite as above. w/ occ. 60° Hairline Py-Qtz. vns. Py content inc. ± 5% as dissem. grains. 25° 1cm Py-biot? Qtz vein w/ Tr Cpy at 563.	Same	± 5% Py Tr Cpy		400					
561.5-564	80%	Same	Same									

PROJECT: 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
564-567	100%	Same	Same Qtzite, strg. Br./fr w/black chlor? + Py vnlets.	Str. Tr Chlor	± 1% Py strg. Tr Cpy							
567-568	100%	Same	1.5 cm Py. chlor - Tr ser. Qtz. Vn at 40° to core at 567.5.									
568-572	95%		Qtzite - v. F. gr w/ ± 1% dissem. Py. occ bleached vn. like structures ± 2mm w/ rare Py	like core			640					
572-582	100%	Same	Qtzite as above coarser gr. Heavy Py/black min. zone from 573-575. w/strg. black min. w/ ± 20% Py	Biot?/black Chlor?	± 10% Py ± .5% Cpy							
582-591	100%	Same Qtzite	Same as above. w/ conglom. unit from 584-585.5, ± 50° contact. Also a 1" 45° siltstone unit. Qtzite Has ±1-2% dissem Py and magnetite.	Weak Prop?	± 3% Py rare Tr Cpy		580					
591-601	100%	*Split Same Qtzite	Same rock, strg. Py-chlor? zone ± 10% Py w/ occ Cpy blebs. 20° Py-chlor. Qtz. vein. a 10° 3mm Qtz.-Py-Cpy vn. at 594. 10° Calcite - Py vn w/ Tr Moly. at 596.	Same	± 10% Py ± 1% Cpy Locally Tr Mo		1000 .1%					

Continued Sheet No. 8

PROJECT: 32 Battle Mtn. HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
601-603	100%		Same rock, strg Br, sl sheared	Same	± 5% Py Tr Cpy		840					
603-609	90%	Split Same	Same as above, occ 5° - vert Py - Qtz. frs. rock strg Br. Numerous 1-2mm Py Qtz black chlor. Veinlets ± 40°, 15° occ Cpy veinlets	Same	± 5% Py ± 1% Cpy							
609-612	100%	Same	Same rock, ± 35% Py, Tr Cpy strg. black chlor?. Tr Mo on anhydrite.	Same	Same Tr Cpy		760					
612-616.5	100%	Siltstone	From 613 to : Fine gr Purple - grey siltstone, occ. Py. Vns 30° Frs w/ Py common. Mod. Br.	Same	± 1% Py							
616.5-621.5	80%	Same	Same w/ occ Py vnlets. Hairline ± 30° Mod. Br	Same	Same							
621.5-624.5	95%	Same	Same									
624.5-627	100%	Same	Same				70					
627-630	70%	Same	Same									

PROJECT: Battle Mountain - 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
630-633	100%	Siltstone	Same rock w/occ. Py-Qtz. veinlets w/1-2mm bleached selvedge.	Work Prop(?)	± 1% Py rare Tr Cpy							
623-635	90%	Same	Same rock, 3mm Cpy vn at 634.5 at 10°.		± 2% Py (dissem)		120					
635-638	100%	Same	Same, occ 20° Frac's.									
638-641	100%	Same	Same, Mod Fr/Br	" "	± 1% Py Rare Tr Cpy							
641-642	100%	Same	Same occ. Py-bleached veins.				30					
642-648	60%	Same	Same rock w/occ Py-Cpy fr/fs.	Same	± 2% Py Tr Cpy							
648-649	85%	Same	Same	"	" "							
649-652	100%	Same	Same, w/occ 40° Qtz.-Py-Calcite w/ Tr Cpy Veinlets ± 2 mm wide. Mod Br	Same								
652-654	90%	Same	Same, occ 5° frs, w/py. Abundant tiny frs w/Py	Same	± 2% Py ± .5 Cpy							
654-657	100%	Same	Same, Mod Br	Same	Same							
657-660	50%(Cave)	Siltstone	Same as above, Strg fr/gr. w/Py on frs.	Propylitic	± 1% Py Tr Cpy							
660-662	30%(Cave)	Same	Same	Same	Same		80					
662-664	50%(Cave)	Same	Same	Same	Same							

Continued Sheet No. 10

PROJECT: Battle Mtn. - 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
664-669	50%	Same	Same, cave to 667 then Sl Fr/Br. Siltstone. 3mm Qtz. vn. w/ Silver Min. Tetrahedrite (?) (Sample run assay)	Propylitic	± 1% Py Tr Cpy							
669-672	40%	Same	Same rock, Str Fr/Br Mod Py on Hairline fr/vns w/ Chlor.	Same	Same							
672-674	70%	Same	Same, sl Fr/Br, 40° banding sl inc. Cpy in Ff w/Py	Same	± 2% Py ± 5% Cpy		80					
674-679	100%	Same	Same, Mod Fr, sl Br. occ Cpy blebs w/Py in Qtz. patches.	Same	Same							
679-680	100%	Same	Same, w/ Tr Mo	Same	± 1% Py .5% Cpy TR MO							
680-683	100%	Same	Same, sl Br Mod Fr w/ occ Py -Qtz. veining ± 2mm @ 40° minor dissem. Py.	Same	± 2% Py Tr Cpy							
683-686	95%	Same	Str fr/Br, same rock Tr Cpy w/ Py in frs/vns usually Hairline.	Same	Same		100					
686-687	75%	Siltstone	Same, rock as above v. str Fr/Br.	Same	± 1% Py Tr Cpy							
687-690	90%	Same	Same, Sl Br/Fr at 688. 40° Frs.	Same	Same							
690-692	90%	Same	Same, sl Bx, occ Qtz-Py veinlets ± 2mm wide. Str Br/Fr	Same	Same							

PROJECT: Battle Mountain 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
692-694	100%	Siltstone	Same as above on Page 10	Propylitic	± 1% Py Tr Cpy		60					
694-696	100%	Same	Same	Same	Same							
696-701	100%	Same	Same rock, str Fr mod. br. occ zones of incr dissem. Py	Same	± 2% Py Tr Cpy							
701-704	60%	Same	Same, 40° bedding planes. 40° shear. at 703	Same	± 1% Py							
704-706	100%	Same	Same rock, less Fr/Br 40° 2mm Qtz vein w/ Cpy + XTLS of Arsenopyrite at 705.7. Assay Sample	Same	Same ± 2% Py strg Tr Cpy		100					
706-710.6	100%	Same sl more Qtzitic	Same, a 1' zone w/ 10% Py w/ occ. Cpy. all disem. 1.5 cm vein of Qtz-Py-Cpy-almost 70°.	Same	± 20% Py ± 2% Cpy							
710.6-715	100%	Same	Same but occ beds of Qtzite which has more Sulfide. zone from 711-714 w/ ± 1% Cpy in veins w/Py + Qtz	Same	± 1% Py 1% Cpy							
715-717	100%	Siltstone & Qtzite	Same as above, occ tiny Qtz veins cut rock.	Prop.	± 1% Py Tr Cpy		240					
717-718	100%	Same	Same, sl Br.	Same	Same							
718-720	100%	Same	Same, banded-like-50° planes mod Fr, sl Br.	Same	± 3% Py Tr Cpy							

Continued Sheet No. 12

PROJECT: Battle Mountain HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERAL IZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
720-723	100%	Same	Same rock, a Qtz vein 60° ± 1 cm wide w/Qtz.-Py. at 722	Same	± 1% Py Tr Cpy							
723-726	100%	Same	Same occ Qtz-Py veins w/alt Haloe.	Same	Same							
726-728	100%	Same Siltstone	Same, more Siltstone occ 20° Fr. Mod Fr, sl Br.	Same	2% Py Tr Cpy		80					
728-730	100%	Same	Same as above	Same	Same							
730-735	60%	Same	Same, str Br/fr	Same	± 1% Py Rare Tr Cpy							
735-737	100%	Same	Same as above sl Br, Mod Fr	Same	Same							
737-739	100%	Same	Same, occ alt Qtz. Py veinlets	Same	Same		120					
739-743	100%	Same & Qtz.	Same rock, occ banding & network of Qtz.-Py-? veining ± 2mm w/ alt Haloe in Wall rock	Prop. w/ veining	± 1% Py Mostly on veins + Frs.							
743-744	100%	Same	Same as above Mod Fr/Br	Same	Same							
744-753	100%	Same	Same, sl more Quartzitic occ Tr Cpy. Less veining	Same	Same Tr Cpy		200					
753-756.2	100%	Qtzite	Same as above, Qtzitic w/ Py-Qtz. veinlets w/sparse Cpy blebs. ± 10°	Same	± 1% Py ± .5% Cpy							
756.2-763	100%	Same Siltstone	Qtzite to 761 then siltstone as above. Qtzite has ± 5%Py occ Cpy. mostly dissem. sl br. mod Fr.	Same	± 5% Py 1% Cpy		320					

Continued Sheet No. 13

PROJECT: Battle Mtn. - 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERAL IZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
763-768	100%	Same Siltstone	Same, sl Br, Mod Fr rock, occ Qtz-Py veins. occ 20° sls	Same	± 1% Py Tr Cpy		240					
768-771	100%	Same	Same, Vsl Fr/Br rock, occ Calcite-Qtz-Py veins ±2mm @ 60°	Same	± 1% Py							
771-781	100%	Same X Sl more Qtzite	Same rock as above. occ vuggy Qtz. veins w/rare Tr Bor. and sparse blebs at Cpy in Qtz. vein at 780.7.	Same	± 1% Py Tr Bor str Tr Cpy		160					
781-789	100%	Same	Same, mostly Siltstone. banded, w/occ Cpy-Qtz. vein at 10°	Same	± 1% Py ± 1% Cpy		210					
789-793	100%	Siltstone	Same rock as above, sl Fr Br.	Prop.	± 1% Py Tr Cpy							
793-796	75%	Same	Same rock. strg Br/Fr w/ occ Qtz. veins w/Py.	Same	Same		340					
796-802	100%	Same	Same siltstone, dark, viste Br/Fr.	Same	± 1% Py							
802-815	50%	Same	Same, Py mostly confined to hairline vns/frs.	Same	± 1% Py		440					
815-819	95%	Same	Same as above, 30-40° frs, sl Br, mod fr rock	Same	Same							
819-822	100%	Same	Same siltstone to 821 then Qtzite.	Same	Same							

PROJECT: Battle Mtn. - 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
			From 821 to 877:									
822-827	100%	Qtzite	lt grey med gr Qtzite, w/ ± 5% dissem Py, tr Cpy. Mod fr/Br increasingly conglomeratic - up to 4mm.	Same	± 3% Py Tr Cpy		740					
827-829	100%	Same	Same	Same	Same							
829-830	100%	Same	Same	Same	Same							
830-833	80%	Same	v. strg fr/Br occ Cpy in cave Qtz.	Same	Same ± 1% Cpy							
833-835	100%	Same	Same rock, mod-strg fr/Br.	Same	Same Tr Cpy		530					
835-837	100%	Quartzite	Same rock, sl Br, str Fr w/ tiny Py. ffs.	Propylitic	± 5% Py Tr Cpy							
837-841	100%	Same Sl Congl.	Same, rock sl. conglom. str Py in tiny frs (40° contact w/ Cong. unit)	Same	Same							
841-849	100%	Same	Same rock, Tr green Oxide Ca at 843' less Py.	Same	± 2% Py Tr Cpy		240 + 370					
849-854	100%	Same	Same Congl. Qtzite as above. Sl Fr/Br.	Same	Same ± 1% Cpy							
854-858	95%	Same	Same rock, Strg Fr/Br.	Same	± 2% Py Tr Cpy		630					
858-860	100%	Same	Same		± 2% Py							
860-863	100%		Same, at 860.5 the Congl. Qtzite grades into Qtzite.	Same								

PROJECT: Battle Mtn. - 32 HOLE NO.: 32-3-74

FROM-TO	% RECOVERY	ROCK TYPE	DESCRIPTION	ALTERATION	MINERALIZATION	GRAPHIC LOG	ASSAY (ppm) Cu	Pb	Zn	Mo	Ag	Au
863-867	100%	Qtzite	Same, sl. fr/Br decrease Py	Same	± 1% Py in Frs.		500					
867-869	100%	Same	Same rock as above									
869-872	100%	Same Qtzite	Same Qtzite, V. sl. congl. rare Tr born. and inc. Py.	Propylitic	± 5% Py ± .5 Cpy		600					
872-878	100%	Meta Siltstone	From 877 to: 1035 Siltstone as before, metamorphosed. V. fine gr, banded dark grey - purple. occ Qtz. Py vns ±2mm w/ alt. Haloes. occ Tr Cpy. w/Py.	Same	± 5% Py Tr Cpy							
878-879.5	100%	Siltstone	as above w/	Same	± .5% Py		190					
879.5-884.5	100%	Same	Same rock, occ tiny almost vertical fracts.	Same	± .5/Py							
884.5-886.5	100%	Same	Same rock	Same	±.5% Py							
886.5-889	100%	Same	Same, sl Fr/Br	Same	Same							
889-891.5	100%	Same	Same	Same	±.5% Py							
891.5-893	100%	Same	Same rock, sl inc. veining w/ alt Haloes.	Same	Same		140					
893-897	100%	Same		Same	Same							

GEOLOGIC LOG (Continuation Sheet)

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
897-899	100	Meta-Silt-stone	Same as above	Prop./Vein-ing	± 1% Py on Frs.							
899-903	100	Same	Same, inc veins, w/40°-50° common. Sl Py inc. also. Rock str fr/Br	Prop/veining	± 2% Py		190					
903-904.6	100	Same	Same as above	Same	± 1% Py							
904.6-906	5	Same (Cave)	(Cave)	--	--							
906-910	2	Cave	Cave	--	--							
910-912	50	Same	Mostly cave + Str Br/fr rock	Same	± 1% Py							
912-914	100	Meta-Silt-stone as above	Same siltstone as above. Mod fr, sl Br.	Same	± 1% Py							
914-918	100	Same	Same, Occ lighter color banding ± 10° (flat)	"	± 1% Py							
918-924	30	Same	Same, str fr/Br sl inc dissem Py and in tiny frs.	Same	3% Py Tr Cpy							
924-924.6	100	Same	Same as above	Same	± 1% Py Tr Cpy							
924.6-925	100	Same	Same, str fr/Br	Same	Same							
925-927	100	Same	Same	--	--							
927-928	100	Same	Same, occ 40° frs.	Same	Same							
928-929	80	Same	Same, v. str fr/Br	Same	Same							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 17

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
929-935	100	Same	Same rock, mod fr/Br occ lt. banding. Py in frs.	Same	± 1% Py rare tr/cpy							
935-938	90	Same	Same, 30° shear/crushed zone 1" wide. Sl inc. Py.	Same	± 3% Py							
938-940	100	Same	Same, mod. fr/Br 30°-40° frs.	Same	1% Py rare tr/Cpy							
940-941	100	Same	Same	Same	Same							
941-943	100	Same	Same, a 30° Quartz.- Cpy - Mo vein - 2 mm wide at 942. v. str br/fr rock.	Same	1% Py tr cpy rare tr Mo							
943-944	85	Same	Same	Same	Same No Mo Tr Cpy							
944-947	100	Meta-Siltstone as above	Same rock, sl Br str fr	Prop.	± 1% Py							
947-950	100	Same	Same rock, sl less fr/Br occ - sparse Cpy -Py vns ± 2mm wide @30°.	Same	± 1% Py Tr Cpy							
950-952	100	Same	Same rock	Same	± 1% Py rare Tr Cpy							
952-952.6	100	Same	Same rock, v. str fr/Br	Same	± 1% Py							
952.6-955	100	Same	Same, sl fr/Br	Same	± 1% Py Tr Cpy							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 18

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
955-958	100	Same	Same, Mod fr/Br. occ 1mm Qtz-Py vn.	Same	±.5% Py							
958-963	100	Same	Same, a 1° zone of lighter siltstone w/ ± 1% Cpy and 3% Py. Mod fr/Br	Same	± 3% Py ± 1% Cpy Locally							
963-965	10	Same	(Cave)	--	--							
965-968	25	Same	Cave v. str fr/Br rock	Same	± 1% Py							
968-970	35	Same	Same	Same	± 1% Py							
970-971	75	Same	Same	Same	1% Py							
971-976	90	Same	Same rock, Mod fr, sl Br 30°-40° frs + veinlets common	Same	± 1% Py							
976-978	100	Same Meta-Siltstone	Same as above, occ 30° frs w/alt-bleached haloes.	Propy/vein	± .5% Py							
978-980	60	Same	Str fr/Br rock	Same	Same							
980-981	90	Same	Same	Same	Same							
981-983	100	Same	Same rock, mod fr/Br 30° feldspar/Qtz. vein. occ 40° frs.	Same	±1% Py							
983-986	80	Same	Str fr/Br	Same	± .5% Py							
986-989	100	Same	Mod fr/Br, Bx zone crushed @988.7-989	Same	1% Py							
989-992	60	Same	Str fr/Br rock	Same	Same							

GEOLOGIC LOG (Continuation Sheet)

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
992-993	75	Same	Str fr/Br	Same	Same							
993-997	100	Same	Same, crushed/gauge seam w/45° angle to core. Core sl Br or fr. 15° bedding.	Same	Same Tr Cpy							
997-1005	100	Same	Same, a 70° bed of sed w/chlor-Py-Cpy Min. ± 15 cm. wide. 15° bedding	Same	± 1% Py ±.5% Cpy Tr Mo							
1005-1015	100	Same	Good solid meta-siltstone core. occ fr, v. sl Br. occ calcite ffs. 5mm calcite-Qtz.-Py-Cpy Tr sphalerite vein - 40°	Same								
1015-1023	100	Same	Same as above, w/occ 3mm Qtz-calcite-Py-Cpy veinlets @ 35° sl Br/fr.	Prop	± 1% Py							
1023-1032	100	Same	Same, occ Qtz-Py veins ±35°, sl. br/fr rock	"	1% Py							
1032-1041	100	Same	Same meta-siltstone to 1035 then meta-Quartzite. occ qtz veining	Same	± 1% Py							
		Quartzite	From 1035 to 1055: Quartzite Med. gr, fairly pure, (resembles an intrusive) has dissem Py, Magnetite, Pyhrohtite and Cpy. lt. grey, w/occ [illegible]	Epizonal	± 3%							
1041-1052	100	Same (Petro @ 1050)	Same as above occ Cpy/Py vns steep, ± 70-80° w/Chlor	Same	± 10% Py ± 1% Cpy							
1052-1056	100	Meta-Silt-stone	From 1055 to 1065: Quartzite as above to 1055 then Meta-siltstone as before. Only occ. ff Py. w/tr Cpy	Same	± 10% Py Tr Cpy							

32-3-74 1050'

The original rock was a sandstone. It is relatively poorly sorted with numerous grains of chert as well as crystalline quartz. It is only slightly arkosic, with a preponderance of plagioclase. Alteration has been upper epizonal.

Quartz has grown and coalesced but often it traps bundles of tremolite needles along grain boundaries. These show strong retrograde alteration to amesite. Feldspars are wholly destroyed, and K-spar is replaced by granular patches of ankerite, minor kaolin, and associated pyrite and chalcopyrite anhedra. Many patches of ankerite contain relics of earlier tremolite prisms.

Mineral percentages appear as follows: quartz 67%, kaolin 3%, ankerite 12%, montmorillonite 1%, pyrite 4%, tremolite 1%, sphene 1%, orthoclase 2%, apatite 0.5%, amesite 7%, chalcopyrite 1%.

GEOLOGIC LOG (Continuation Sheet)

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1056-1063	100	Meta-Silt-stone	Siltstone as above, w/occ. Qtz. veins w/ alt haloes. 40° shear/gauge 1cm. @ 1059.	Prop.	± .5% Py							
1063-1073	100	Quartzite	From 1065 to 1154 : Quartzite, med to fine gr, lt grey, occ congl. w/ rounded clasts ± 3mm. a 30° fault gauge 1070-1071. Py inc in Quartzite.	Prop.	± 3% Py strg Tr Cpy							
1073-1075	20	Same sl more congl.	Shear zone, 30°/60° more congl. unit	Prop	± 1% Py							
1075-1080	100	Qtzite	Qtzite, fine gr, lt grey occ qtz.-Py-Cpy-veinlets ± 30°. A 1cm gauge/shear zone at 30° at 1077.	Prop.	± 1% Py .5% Cpy							
1080-1087	100		Same, sl. more chlorite giving a greenish color. a 15° fr w/chlor. @ 1081 and a congl. unit @ 1081-1083	Prop.	Same							
1087-1099	100	Qtzite sl Congl.	Same as above, sl fr/Br occ 20° Py-Chlor. calc veins. 1mm wide, dissem cpy + Magnetite Tr Mo in Qtz vein @ 1092.5	Prop.	± 2% Py ± 1% Cpy Tr Mo 2% Mag.							
1099-1108	100	Same (not Congl.)	Same rock, v. strg Py/Cpy zone 1099-1100	Prop w/ Chlor	±5% Py (40% locally) ± 1% Cpy tr mo							
1108-1118	100	Same	Same, dissem sulfides up to 25% w/cpy to 2%. Chl-qtz-Py vein @ 1113 1cm wide. a 20° 2mm calcite-Py-gypsum vn @1117.8	Prop.	±10% Py ±1.5% Cpy							

GEOLOGIC LOG (Continuation Sheet)

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1118-1128	100	Same	Same as above, a 10° fr w/py-chlor at 1119. A zone from 1122 to 1123 w/Cpy-Py-chlor- veining @ 40° ± 1cm. sl congl. at 1126-28	Prop.	± 3% Py ± 1% Cpy ± 1% Magn.							
1128-1138	100	Same	Qtzite as above, f. gr w/occ coarser gr__ congl. dissem to fine hairline frs w/Py + chlor. occ tr. Cpy usually in 1cm qtz.-calcite-Py-Cpy-veins.	Prop.	± 3% Py Tr Cpy							
1138-1144	100	Qtzite	Same as above sl congl sl fr/Br	Propy	± 2% Py Tr Cpy							
1144-1147	100	Same, sl silty	Same but sl. silty strg fr/Br, common Calcite - zeolite? ff's.	Prop.	± 5% Py rare Tr Cpy							
1147-1154	100	Same sl. congl. Meta-silt-sonte	Same Qtzite, congl. unit. 1150-1154 then banded- purple. (Met) Purple, banded, meta siltstone as before str br/Fr.	Prop.	± 3% Py Tr Cpy							
1154-1155	100	Same	Same as above v. strg fr/Br	Prop.	.5% Py							
1155-1156	100	Same	Same, w/chlor on frs.	Prop.	Same							
1156-1159	100	Same	Same, w/ 3 sets of Qtz.-Py vns w/ alt. Haloes. (one @ 40° another @ 10°, and another @ 80°)	Prop.	.5% Py							
1159-1164	95	Qtzite	From 1159.5 to 1211: Quartzite, lt grey, med. gr w/clasts up to 3mm. occ but sparse Qtz-Py-Cpy-vns @ 50° Mod fr. Br	Prop.	± 1% Py Tr Cpy							

GEOLOGIC LOG (Continuation Sheet)

Group or Project: Battle Mountain | Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1164-1165	100	Meta-Silt-stone	Meta-Siltstone as before a small bed 2' wide. w/ occ Qtz-Py vns ±5mm wide	Prop/vns	± 1% Py Tr Cpy							
1165-1167	100	Same	Same	Same	Same							
1167-1177	100	Qtzite	Qtzite as above, finer gr. w/ 2 sets of vns. one calcite-Py is X-cut by 55° Qtz. Py-Cpy vns ± 3mm wide. A zone of sl coarser Qtzite w/ ± 25% dissem sulfides (up to 2% Cpy) zone becomes conglom. for 6" and a 40° contact w/a finer-silty Qtz.	Same	± 3% Py Stg Tr Cpy (25% sulf. locally)							
1177-1182	100	Same sl. congl.	Same Qtzite, w/ a 5° Qtz.-Py-Cpy vn 3mm wide. Rock mod. Br/fr.	Same	± 2% Py ± 1% Cpy							
1182-1185	100	Same	Same, rock is typical w/ tiny hairline ff/ or vns? w/ Py-Cpy and chlor.	Same	± 2% Py ± 1% Cpy							
1185-1191	100	Same	Same, a more congl. or coarser Qtzite w/40° contact. Rock str fr/Br	Same	± 1% Py Tr Cpy							
1191-1195	100	Same	Quartzite as above, strg fr/Br. occ Py-Qtz.- ff's.	Prop.	±2% Py ±1% Cpy							
1195-1206	100	Same	Same, more congl. strg inc Py/cpy. ± 30% sulfide from 1204-1210	Prop.	±30% Py ± 3% Cpy							
1206-1216	100		Same to 1211. ±35% sulfide, ±5% Cpy a 5" Py-Cpy-Ser.-Qtz. vn @ 1210	Strg tr Sericite								
			From 1211 to 1230 : Meta-Siltstone, purple banded, sl fr/Br									

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 23

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1216-1221	100	Meta-Silt-stone	Same as above w/occ Qtz.-Py Hairline vn-lets w/alt Haloes. 10° Fr @ 1220	Prop.	±.5% Py							
1221-1223	100	Same	Same rock, mod fr/Br	Same	±.5% Py							
1223-1223.6	100	Same	Same rock	Prop.	±.5% Py							
1223.6-1225	100	Same	Same, sl fr/Br	Same	Same							
1225-1229	100											
		Qtzite-v.f. gr.	From 1230 to 1332 : Qtzite, v. f gr., sl. interbedded w/siltstones									
1229-1237	100		Rock is silty w/ sl banding (bedding) locally strg. Py-Chlor - Cpy zones	Propy.	±10% Py 2% Cpy							
1237-1245	100	Same	Same rock, strg sulfide zone from 1238 to 1240 w/Cpy-Py-Mag.-Pryh-Chlor. Locally ± 20% Py + Cpy	Propy	± 5% Py 5% Cpy 2% Mag.							
1245-1255	100	Same	Same rock, sl fr/Br strg 50°bedding	Propy	± 3% Py 1% Cpy 1% Mag.							
1255-1265	100	Silty Quartzite	Same rock as above, strg inc. in Mag-Cpy-Py as dissem to massive zones up to 25%. A 15° Calcite-Qtz.-Cpy vn @1261	"	± 5% Py 2% Cpy 5% Mag.							
1265-1275	100	Same	Same rock less sulfide, rock is more silt-stone w/occ 45° chlor - Py frs. Locally abundant Magnetite	"	±10% Py 5 % Cpy 7 % Magnetite							
1275-1279.6	100	Same	Same, rock almost all meta-siltstone occ. Py-Cpy vns ± 3mm a 50° banding	Prop.	± 2% Py ± 1% Cpy 1% Mag.							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 24

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1279.6-1285.6	100	Same	Same, sl fr/Br, occ but sparse 1-3mm vns w/ Py-Cpy-Chlor. occ 10° frs. w/calcite & chlor.	Prop.	± 1% Py ± .5% Cpy							
1285.6-1286	100	Same	Same	Same	Same							
1286-1289	100	Same	Same, 50° banding occ. inc. Py dissem.									
1289-1299	100	Meta Silt-stone - silty Quartzite	Same, sl fr/Br, well developed 30° banding. occ 1-2mm Qtz-Py-Cpy vning. sl inc Py locally	Prop.	± 2% Py .5% Cpy							
1299-1309	100	Same	Same, mod fr, sl Br occ 30°-40°-50° Qtz. Calcite-Py vns ± 3mm wide. v. little dissem sulf.	Same	± 1% Py ±.5% Cpy							
1309-1316	100	Same	Same, a Qtzite unit - Purple-brown w/ dissem Py 1314-1315 occ 50° frs.	Same	± 2% Py Tr Cpy							
1316-1323	100	Same	Same, str Br/gauge zone, w/50° shear 1316 to 1317. There are occ. irreg defined Qtz. rich bands/vns? which have ±3% sulfides.	Same	± 2% Py Tr Cpy							
1323-1329	100	Same	Same, sl fr/Br rock. Reddish-purple brown Fgr Qtzite w/30° contact. Qtzite has dissem Py,Tr-Cpy. Gauge zone 6" wide at 1328.5-1329 w/ chlor.		± 3% Py Tr Cpy							
1329-1333	100	Same	Same Qtzite to 1332. Then same meta-siltstone as before. Rock mod fr/Br.	Prop.	± 3% Py Tr Cpy							
1333-1339	100	Same	Same as above, strg fr/Br.	Same	±.5% Py							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 25

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1339-1343	90	Same	Same meta-siltstone mod fr-Br	Same	± 1% Py							
1343-1353	100	Same	Same, sl fr/Br, a gauge zone 3" w/strg Br rock @ 1344. occ Qtz-Py-Calcite-vn-lets w/alt Haloes.	Same w/vn-ing	± 1% Py Tr Cpy							
1353-1364	100	Same	Same, sl fr/Br, little sulfide except occ on frs or occ Qtz.-Py vn.	Same	±.5% Py							
1364-1373	100	Same	Same, str Br/fr rock a 25° zone, 3" w/Cpy Py-Qtz as irreg. vn.	Same	±1% Py ± 1% Cpy							
1373-1384	100	Same	Same, sl Br/fr rock only occ Py-Cpy in irreg. zones w/Qtz.	Same	± 1% Py ±.5% Cpy							
1384-1394	100	Same	Same rock but lighter in color, occ Py-Cpy hairline Fr.	Same	± 1% Py Tr Cpy							
1394-1404	100	Same	Same rock sl fr/Br occ calcite-Qtz. vn w/ bleb cpy/Py.	Same	± 1% Py Tr Cpy							
1404-1414	100	Same	Same, mod fr/Br occ Qtz.-Py vns ±2mm.	Prop.	Same							
1414-1424	100	Same	Same, str fr/Br zone @ 1415-1416. then sl fr-br	Same	Same							
1424-1435	100	Same	Same, sl fr/Br inc dissem sulf @ ±1428 ±3% w/ ± 1% Cpy	Same	±3% Py ±1% Cpy							
1435-1445	100	Same	Same, meta-siltstone w/a Swirled-like texture (looks like a turbidite) sl inc Sulf. as above only locally.	Same	± 2% Py ± 1% Cpy							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 26

Group or Project: Battle Mountain | Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1445-1455	100	Meta-Siltstone	Same, w/a swirled banding. A more qtz. rich banding -"zone" w/ 20% sulfides, ±3% cpy. Looks like tension frs.	Prop.	± 20% py ± 3% cpy							
1455-1456	100	Same	Same, rock has chlorfilled fr's.	Same	± 1% py							
1456-1465	100	Same	Same, very contorted in appearance. Ore cpy blebs. and subtle veinlets.	Same	± 2% py ± 1% cpy							
1465-1466	100	Same	Same, occ. strg. dissem. cpy zones.	Same	± 3% cpy ± 2% py							
1466-1475	100	Same	Same, occ. 30° fr's. and ffs. w/chlor-py-stilbite.	Same	± 1% py ± .5% cpy							
1475-1477	100	Same	Same, occ. cpy-py blebs and veinlets	Same	± 3% py 1% cpy							
1477-1485	100	Same	Same, Meta-siltstone, rough and contorted banding. Occ. qtz.-sulfide veinlets. Mod. fr. Br w/ py-chlor, occ. stilbite on ff's.	Propy.	± 3% py ± 1% cpy							
1485-1487.6	100	Same	Same	Same	± 1% py Tr. cpy							
1487.6-1495	100	Same	Same, less sulfide and magnetite.	Same	+ 2% py Tr. cpy							
1504-1507.6	100	Same	Same, 30° "bedding" sl. fr/Br.	Same	+ 2% py Tr. cpy							
1507.6-1513.6	100	Same	Same, occ. 20° qtz-py-cpy veinlets, ± 2mm.	Same	± 2% py Tr. cpy							
1513.6-1518	100	Same	Same, sl. fr/Br.	Same	± 1% py Tr. cpy							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 27

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1518-1523	100	Meta-Siltstone	Same, rock as above, occ. qtz veins w/py-cpy and rare Tr. Mo.	Prop.	± 2% py ± .5% cpy Tr. Mo							
1523-1528	100	Same	Same, sl. more contorted, occ. py-qtz-cpy veins	Same	± 5% py 1% cpy							
1528-1533	100	Same	Same, sl. inc. py-cpy to ±5%	Same	± 4% py 2% cpy							
1533-1538	100	Same	Same, sl. fr/Br., occ. ±10% sulfide zones in qtzose. rich beds.	Same	± 7% py 2% cpy (locally) 1% magn.							
1538-1542	100	Same	Same rock, only ±2% sulfide	Same	± 1% py ± .5% cpy							
1542-1548	100	Same	Same, meta-qtzite sl. fr/Br.	Same	± 1% py Tr. cpy							
1548-1552	100	Same	Same, stg. inc. sulfide in more qtzose bed ±5% from 1550-1552.	Same	± 5% py ± 2% cpy							
1552-1559	100	Same	Same, strg. py-cpy zone in coarser qtzose bed from 1553-1556 as hairline qtz veinlets ±.5mm to 1mm.	Same	± 3% py ± 3% cpy							
1559-1562	100	Same	Same, less sulfide but still occurring in tiny hairline stringers	Same	± 2% py ± 1% cpy Tr. Mo							
1562-1569	100	Meta-Qtzite or Siltstone	Same rock, mod. fr/Br. less sulfide	Same	± 1% py Tr. cpy							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 28

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1569-1571	100	Meta-Qtzite or Siltstone	Same, another strg. inc. sulfide in a qtz-rich, coarser bed.	Prop.	± 3% py ± 2% cpy							
1571-1579	100	Same	Same, sl. fr/Br, occ. calcite-qtz-py-cpy veins with trace sphalerite(?) veins 2mm wide at 10°-20°-60°.	Same	± 1% py ± .5% cpy Tr. Sphal							
1579-1589	100	Same	Same rock, swirled and banded appearance. Occ. 30° - 45° frs. w/stilbite and py on fr. surfaces. Occ. veins w/qtz-py-cpy.	Same	± 3% py ± 1% cpy							
1589-1590	100	Same	Same, with 30° 5Cu. Calcite-qtz-py vein.	Same	± 1% py ± .5% cpy							
1590-1599	100	Same	Same, occ, more silicious units with ± 5% sulfide	Same	± 3% py ± 1% cpy							
1599-1600	100	Same	Same	Same	± 5% py 1% cpy							
1600-1609	100	Meta-Siltstone	Same, with occ. bands or beds ± 6" - 10" wide with qtzite. Containing ± 5% sulfides. Mostly magnetite and cpy-py.	Same (Epizonal)	± 3% py 2% Mag ± 1% cpy							
1609-1619.6	100	Qtzite unit in Siltstone	Same, a qtzite unit in siltstone with ± 10% Mag and 5% py. ± 2% cpy to 1620.6.	Same	± 10% Mag ± 5% py ± 2% cpy							
1619.6-1629	100	Meta-Siltstone or v.f. gr. Siltstone (qtzite)	Purpleish very fine grain siltstone (qtzite) with occ. V fine dissem. py/cpy (± 3%) locally. 30° bedding.	Same	± 3% py ± 1% cpy (locally)							
1629-1630	100	Same	Same, with ± 3% dissem. py-cpy.	Same	Same							
1630-1639	100	Same	Same, sl. fr/Br., with numerous qtz, occ. py, veins 2-3mm with alt. haloes. Occ.-local ± 5% Sulfide as V tiny dissem. grains.	Same	Same							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 29

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1639-1640	100	Meta-Siltstone or v.f. gr.Siltstone (qtzite)	Same as 1630-1639, no Sulfide.	Prop.	± 1% py Tr. cpy							
1640-1648	100	v.f. qtzite or Meta-Siltstone	Same as 1630-1639, mod. fr/Br., abund. veins with alt. haloes. Occ. 10-20° calcite-py vein	Epizonal w/veins	± 1% py Tr. cpy ± .5% Mag.							
1648-1650.6	100	Same	Same, mod. 50° alt. haloe veins	Same w/veins	± 1% py Tr. cpy							
1650.6-1658	100	Same	Same, mod. fr/Br. with stilbite on frs.	Same	± 1% py Tr. cpy							
1658-1660.6	100	Same	Same, abundant qtz-rich beds ± 6" with ± 2% cpy as tension ffs.	Same few veins	± 2% py ± 2% cpy							
1660.6-1668	100	Same	Same, rare alt. haloe veins. Rock mod. fr/Br. strg 2mm fr with stilbite. Tr. py @ 10° to core. Rock more qtzitie	Same	± 3% py ± .5% cpy							
1668-1671	100	Same	Same, mod. fr/Br. Tr. arsenopyrite @ 1670 in qtz vein.	Same	± 2% py Tr. cpy Tr. arsenopy.							
1671-1678	100	Same	Same, mod. fr/Br. Occ. qtz-rich beds	Same	± 2% py ± .5% cpy							
1678-1681	100	Meta-Siltstone or v.f. gr. quartzite	Same, a contorted "swirled" appearance, with occ. qtz-rich bands with more sulfides. Sl. fr/Br., occ. calcite-qtz-py veins ± 3mm wide	Epizonal	± 1% py Tr. cpy							
1681-1688	100	Same	Same, mod. fr. and Br.	Same	± 2% py ± 1% cpy							
1688-1692	100	Same	Same	Same	± 2% py ± 1% cpy							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 30

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1692-1698	100	Meta-Siltstone or v.f. gr. Quartzite	Same as 1678-1681, mod. fr. and Br., Str. fr/Br. rock, due to 10° stilbite ff.	Epizonal	± 1% py Tr. cpy							
1698-1700	100	Same	Same, mod. fr/Br., sl. inc. sulfides	Same	± 3% py ± 1% cpy							
1700-1708	100	Same	Same, str. fr/Br.	Same	± 2% py ± 1% cpy							
1708-1710	100	Same	Same rock, mod. fr/Br., 50° bedding	Same	± 1% py Tr. cpy							
1710-1718	100	Same	Same, sl-mod. fr/Br., 20° contact with a qtzite unit. 1712.6-1714 with ± 5% cpy, 10% py, ±2% Mag.	Same	± 10% py ± 5% cpy ± 2% Mag							
1718-1720	100	Same	Same rock, v. fr/Br.	Same	± 1% py-							
1720-1728	100	Same	Same, v. strg. fr/Br. Occ 30° fr's with stilbite and 40° fr's with Tr. py and chlor	Same	± 1% py Tr. cpy							
1728-1730	100	Same	Same, v. strg. fr/Br. with occ. 40° shears. One zone 1729.5-1730 with 10% cpy as ff's with magnetite	Same	± 3% cpy 1% Mag							
1730-1733	100	Same	Same, mod. fr/Br, only ± 1% sulfide	Same	± 1% py ± .5% cpy							
1733-1738	100	Same	Same, v. strg. Br/fr. and shear zone with 40° @ 1736. Strg. calcite veins @ 1738, ± 3mm wide	Same	± 2% py ± .5% cpy							
1738-1740	100	Same	Same rock, strg. fr/Br. crushed zone @ .740 (50°)	Same	± 2% py ± 1% cpy							

GEOLOGIC LOG (Continuation Sheet)

Continuation Sheet No. 31

Group or Project: Battle Mountain

Hole No. 32-3-74

From-To	% Rec.	Rock Type	Description	Alteration	Mineralization	Graphic Log	Assay (ppm) Cu	Pb	Zn	Mo	Ag	Au
1740-1748	100	Meta-Siltstone or v.f.gr. Quartzite	Same as 1738-1740, rock is more solid - less Br. and strg. inc. sulfide as fine stringers and veins	Epizonal	± 5% py ± 1% cpy							
1748-1750	100	Same	Same rock, sl. Br/fr. Occ. lt-qtz-rich "pods" with inc. py-cpy	Same	± 1% py ± .5% cpy							
1750-1757	100	Same	Same, sparse (1 or 2 per foot) qtz-py-cpy veins ± 3mm wide 40-50°	Same	± 2% py ± .5% cpy							
1757-1760	100	Same	Same, mod fr/Br. Sl. inc. py-cpy in hairline ff's.	Same	± 3% py ± 1% cpy							
1760-1766.6	100	Same	Same, mod. fr/Br., occ. 40° fr's with stilbite and py.	Same	± 1% py ± .5% cpy							
1766.6-1770.6	100	Same	Same, sl. congl. appearance rounded qtz blebs have ± 2% cpy with Mag and py.	Same	± 3% py ± 1% cpy							
1770.7-1776.6	100	Same	Same, more qtzose-rich unit - lt. color with v.f. hairline py-cpy ff's.	Same	± 3% py ± 2% cpy							
1776.6-1781	100	Same	Same, a 40° shear/gouge 4mm wide @ 1778. Rock sl. fr/Br.	Epizonal (Propyrite of appearance retrogressive)	± 2% py ± 1% cpy							
1781-1786	100	Same	Same, @ 1783 a v. str. fr/Br. zone with 40-50° shears to 1788.	Same	± 1% py < .5% cpy							
1786-1791	100	Same	Same, same v. strg. fr/Br. and sh. zone to 1788. No inc. sulfide.	Same	± 1% py Tr. cpy							
1791-1801	100	Same	Same, mod. fr/Br. with stilbite ± py on fr's. A 5mm, 40° gouge zone @ 1796.5. v. sparse (<1 per foot) qtz-py-cpy veins.	Same	± 1% py Tr. cpy							

END

END

LIST OF ABREVIATIONS

W/	with
Alt	Altered/altgration
Occ	Occasional
Str	Strong
Br	Broken
Fr	Fractured
Mod.	Moderate
Vn	Vein
Inc	Increase
Sl	Slightly
Min	Mineral
F.	Fine
Ser	Sericite
Arg.	Argillic
Chlor	Chlorite
Prop	Propylitic
Dissem	Disseminated
Biot	Biotite
Py	Pyrite
Cpy	Chalcopyrite
Zn	Zink Mineral
Mo	Molybdenite

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 7 PM
Date: July 31/74

CONTRACTOR: Roberr Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1299 End shift: 1317

BIT DATA:

	#1	#2	#3
Serial No:	L35 548 34		
Make	Longyear		
Size	NQ		
Depth out	1299		
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft.	Hours:
	to			
	to			
	to			

CIRCULATING FLUID: Pressure
Mud and additives used: 7 mud 7 qts Quebracho 14 qts Caustic.
4 Gals Cutting oil.

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS Pull Rods Change Bit - Change Rods
& Put New String At Bottom
Very Bad Vibration. Broken Ground.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 18' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $306.00

Driller: L Mandamin 11
Helper G Abbott 11
Helper R Smith 11

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 25 174

CONTRACTOR: Rober Smith Drilling County Lander State Nev
Mining District: Battle mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1237 End shift: 1267

BIT DATA:	#1	#2	#3
Serial No:	L45 34430 PG		
Make	Longyear		
Size	NQ		
Depth out	1267		
Depth in	1237		
Total Ft.	30		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 mud 6 Gals diesel 6 qts Cellex
6 qts Lignite. 6 qts Master-Seal.

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 30' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 510.00

Driller: L. Mandamin 10 hrs.
Helper G. Abbott 10
Helper R. Smith 10

Approved: W. H.

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

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Mining Division
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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 A M to 2 P M
Date: July 26/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1267 End shift: 1285

BIT DATA:	#1	#2	#3
Serial No:	L45 34430 P6		
Make	Longyear		
Size	NQ		
Depth out	1285		
Depth in	1267		
Total Ft.	17		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 5 mud 5 Gals diesel 5 qts Lignite
6 qts Cellex 6 qts master Seal.

Water used: 3000 gal. Miles hauled 30 Cost

REMARKS
Broke Rods.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 18' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 306.00

Driller: L Mandhamid 6 hrs.
Helper G Abbott 6
Helper R. Smith 6

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 30/74

CONTRACTOR: Robert Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): Appr. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1285 End shift: 1299

BIT DATA:	#1	#2	#3
Serial No:	L45 34430 P6	L35 54834	
Make	Longyear	"	
Size	NQ	NQ	
Depth out	1289	1299	
Depth in	1285	1289	
Total Ft.	4	10	
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 8 mud 16 qts Caustic Soda
8 qts Quebracho 8 qts Master-Seal.

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 14' @ 170
Cored footage charges
Mis'c charges

Shift Total $ 238.00

Driller: L. Mandsmith 10 hr.
Helper G. Abbott 10
Helper R. Smith 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 22/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N20°W 120'
From Drill Hole 32-1-74

Depth start shift: 1138 End shift: 1178

BIT DATA:	#1	#2	#3
Serial No:	4383-11		
Make	JK Smit		
Size	NQ		
Depth out	1138		
Depth in	1138		
Total Ft.	40		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 7 mud 7 qts Cellex 7 Gals diesel
7 qts Lignite 7 Gals Flo-snl

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 40' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 680.00

Driller: L Mandamid 10 hrs.
Helper G Abbott 10
Helper C Redden 10
Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 23/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1178 End shift: 1216

BIT DATA:	#1	#2	#3
Serial No:	4077-H		
Make	JK Smit		
Size	NQ		
Depth out	1216		
Depth in	1178		
Total Ft.	38		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 7 mud 7 qts Lignite 7 qts Cellex
7 Gals diesel 7 Gal Flo-Sal.

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 38' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 646.00

Driller: L Mandamus 10 hrs.
Helper G Abbott 10
Helper C Redden 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

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DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 24/74

CONTRACTOR: Roger Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1216 End shift: 1237

BIT DATA:

	#1	#2	#3
Serial No:	L4S 34426 DG		
Make	Longyear		
Size	NQ		
Depth out	1237		
Depth in	1216		
Total Ft.	21		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bgs mud 6 qts Collex 6 qts Lignite
6 Gals diesel 6 qts master-seal

Water used: 3000 gal. Miles hauled 30 Cost

REMARKS
Pull Rods & change Bit.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 21' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 357.00

Driller: L Mandamin 20 hrs.
Helper G Abbott 10
Helper R Smith 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 19/74

CONTRACTOR: Robert Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 993 End shift: 1052

BIT DATA:	#1	#2	#3
Serial No:	4385 H		
Make	JK Smit		
Size	NQ		
Depth out	1052		
Depth in	993		
Total Ft.	59		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 8 Bgs. mud 8 Gals Diesel 8 qts Cellex
2 Bags Quik-Trek 8 qts Lignite

Water used: 5000 gal. Miles hauled 50 Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 59' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 1003.00

Driller: L Mandamin 10 hrs
Helper G Abbott 10 hrs
Helper C Redden 10 hrs.

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

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DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 20 /74

CONTRACTOR: Roger Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1052 End shift: 1095

BIT DATA:	#1	#2	#3
Serial No:	4385 H	4384 H	
Make	JK Smit	JK Smit	
Size	NQ	NQ	
Depth out	1063	1095	
Depth in	1052	1063	
Total Ft.	11	32	
Condition	Good	Good	

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 7 Bags mud 7 Gals diesel 7 qts Collex
7 gals Flo-Sal. 7 qts Lignite

Water used: 5000 gal. Miles hauled 50 Cost

REMARKS Pull Rods & Change Bit at 1063'

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 43' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 731.00

Driller: L Mandamin 10
Helper G Abbott 10
Helper C Redden 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 AM
Date: July 21/74

CONTRACTOR: Roger Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 1095 End shift: 1138

BIT DATA:

	#1	#2	#3
Serial No:	4834-H		
Make	JK Smit		
Size	NQ		
Depth out	1138		
Depth in	1095		
Total Ft.	43		
Condition	Good		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 mud 6 Gals diesel 6 qts Cellex 6 qts Lignite 6 Gals Flo-Sal 1 Bag Quik-Trol.

Water used: gal. Miles hauled Cost

REMARKS Pull Rods & Change Bit - Put Rods Back down.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 43' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 731.00

Driller: L Mandamin 10 hrs
Helper C Redden 10
Helper R Smith 10

Approved: [signature]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

0. *

374.00 +
1,003.00 +
731.00 +
731.00 +
680.00 +
646.00 +
357.00 +
510.00 +
306.00 +
238.00 +
306.00 +
5,882.00 *

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Mining Division
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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 A M to 6 M
Date: July 13/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole

Depth start shift: 941 End shift: 958

BIT DATA:	#1	#2	#3
Serial No:	43824		
Make	J K Smit		
Size	NQ		
Depth out	958		
Depth in	930		
Total Ft.	28		
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bags Mud 6 Gals Flo-Sal
6 qts Cellex 6 Bags Lignite 6 Gal diesel.

Water used: 5000 gal. Miles hauled 50 Cost

REMARKS Broken Ground

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 17' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 289.00

Driller: L Mandamin 10
Helper G Abbott 10
Helper C Redden 10

Approved: W. A.

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 14/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-7-74

Depth start shift: 958 End shift: 971

BIT DATA:

	#1	#2	#3
Serial No:	4382 H		
Make	JK Smit		
Size	NQ		
Depth out	971		
Depth in	930		
Total Ft.	41' Total.		
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bags mud 6 qts cellex 6 qts Lignite. 12 Gal Flo-Sal. 2 Bags Quik-Trol.

Water used: 5000 gal. Miles hauled 50 Cost

REMARKS Trouble with Circulation & Cave.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 13' @ 17.00
Cored footage charges
Mis'c charges 2 hrs. Reaming Cave.

Shift Total $ 221.00

Driller: L Mandrwin 10 hrs.
Helper G Abbott 10
Helper C Redden 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 18 1974

CONTRACTOR: Rober Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70W 120'
From Drill Hole 32-1-74

Depth start shift: 971 End shift: 993

BIT DATA:

	#1	#2	#3
Serial No:	4081 H		
Make	JK Smit		
Size	NQ		
Depth out	993		
Depth in	971		
Total Ft.	22		
Condition	Good.		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bags mud 6 qts Cellex 6 Gals Diesel
6 Gals Flo-Sal 2 Bags Quik-Trol. 6 qts Lignite

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS Pull Rods & Change Bit - Put Rods Back Down

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 22' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 374.00

Driller: L. Mandamin 10 hrs.
Helper G. Abbott 10
Helper C. Redden 10

Approved: W. L.

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 10 /74

CONTRACTOR: Roger Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 924 End shift: 930

BIT DATA:	#1	#2	#3
Serial No:	L35 56468		
Make	Longyear		
Size	NQ		
Depth out	930		
Depth in	924		
Total Ft.	6		
Condition	Finished		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bags mud 6 qts Cellex 2 Bags Quik-Trol 6 qts Lignite 6 Gals diesel.

Water used: 5000 gal. Miles hauled 50 Cost

REMARKS Pull rods & change Bit.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 6 @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 102.00

Driller: L. Mandamin 10 hrs.
Helper G. Abbott 10
Helper C. Redden 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
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TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 11/74

CONTRACTOR: Riber Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 930 End shift: 930

BIT DATA:

	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 4 Bags mud 2 Quik Trol 4 qts. Cellex 4 qts Lignite 6 Gals Diesel. 1/2 Bag Hy-Seal 1/2 Bag Flo-Seal 3 Bags Cement.
Water used: 4000 gal. Miles hauled 40 Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges 4 hrs Reaming Cave.

Shift Total $ No charge

Driller: L Mandemin 10 hrs.
Helper G Abbott 10
Helper C Redden 10

Approved: [signature]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 12/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mtn Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N 70° W 120'
From Drill Hole 32-1-74

Depth start shift: 930 End shift: 941

BIT DATA:

	#1	#2	#3
Serial No:	4382 H		
Make	JK Smit		
Size	NQ		
Depth out			
Depth in	930		
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:

CIRCULATING FLUID: Pressure
Mud and additives used: 5 Bags Mud 5 qts Cellex 6 qts Lignite 6 Gals Flo-Sal. 5 Gals Diesel.

Water used: 5000 gal. Miles hauled 50 Cost

REMARKS Wash out 95' cement - Not Set Good

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 11' @ 17.00
Cored footage charges
Mis'c charges

Shift Total $ 187.00

Driller: L Mandumin 10 hr.
Helper G Abbott 10
Helper C Redden 10

Approved: [signature]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 4 PM
Date: July 7/74

CONTRACTOR: Roger Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: End shift:

BIT DATA:

	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS
Stand-By No-Bits.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges

Shift Total $ No charge

Driller: L Mandamin 8
Helper G Abbott 8
Helper C Redden 8

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 4 PM
Date: July 8/74

CONTRACTOR: Robert Smith Drilling County Lander State Nev
Mining District: Battle Mtn. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 910 End shift: 910

BIT DATA:

	#1	#2	#3
Serial No:	L45 316 44 PG		
Make	Longyear		
Size	NQ		
Depth out	910		
Depth in	886		
Total Ft.	24		
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 3 Bag mud 3 qts Lignite.
3 qts Cellex 3 Gals Diesel.

Water used: 2000 - gal. Miles hauled 20 Cost

REMARKS Pull rods & Change Bit
Very Windy.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges

Shift Total $ No chrg

Driller: L Macdonald 6 hr
Helper G Abbott 6
Helper C Redden 6

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 A M to 6 P M
Date: July 9/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 910 End shift: 924

BIT DATA:

	#1	#2	#3
Serial No:	L3556470		
Make	Longyear		
Size	NQ		
Depth out	924		
Depth in	910		
Total Ft.	14		
Condition	Finished		

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bag mud 6 qts Lignite 6 qts Cellex 6 Gals Diesel. 1 Bag Quik Trol.

Water used: 4000 gal. Miles hauled 40 Cost

REMARKS Very Broken Ground

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 14' @ 170
Cored footage charges
Mis'c charges

Shift Total $ 2380

Driller: L Mandamin 10
Helper G Abbott 10
Helper C Redden 10

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 3/74

CONTRACTOR: Roger Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 886 (903 not) End shift: 910

BIT DATA:

	#1	#2	#3
Serial No:	1643		
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 5 Bag mud 5 qts Collex 5 qts Lignite 5 Gal Diesel

Water used: gal. Miles hauled Cost

REMARKS
Last Bit Finished - Not due to Contractors. Fault.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges ✓ 903 to 910
Cored footage charges 24' 7@ 17.00
Mis'c charges

Shift Total $ 119.00

Driller: L Mandamin 10 hrs
Helper G Abbott 10 hrs
Helper C Redden 10 hrs.

Approved: [signature]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 4 PM
Date: July 5/74

CONTRACTOR: Roberson Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: End shift:

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: Pressure
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

STAND-BY - NO BITS.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges

Shift Total $ 100.00

Driller: L Mandamin 8
Helper G Abbott 8
Helper C Redden 8

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 4 PM
Date: July 6/74

CONTRACTOR: Roberson Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: End shift:

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft.	Hours:
	to			
	to			
	to			

CIRCULATING FLUID: Pressure
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

Standby - No Bits.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges

July 4th weekend & Gone - there

Shift Total $ No charge

Driller: L Mandrum 8
Helper G Abbott 8
Helper C Rodden 8

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

R. M. Smith Drilling Ltd.

1446 WINDSOR CRESCENT
DELTA, B.C.
943 - 4308

Aug 16/74
INVOICE #5

To: SUMMA CORPORATION.
MINING DIVISION
P.O BOX 1126
TONOPAH, Nevada 89049

Period: August 1st - 15th.

FOOTAGE 1317-1801 - 484' @ $17.00	- $8228.00
WATER TRUCK RENTAL 2 weeks @ $100.00	- $ 200.00
DEMOBILIZATION	- $ 400.00
9-MAN HOURS REAMING down New REAMING SHELL @ 12.50	- $112.50
4-pcs. NW CASING x 2' lengths @ 26.00 LEFT IN HOLE ON REQUEST.	- $104.00
1 N.W TO NX CASING ADAPTER LEFT IN HOLE ON REQUEST.	- 24.00
TOTAL	$9068.50

O.K. W.F.

to be paid to Jim Long the contractor - W.F.

0.00 *

323.00 +
289.00 +
119.00 +
100.00 +
238.00 +
102.00 +
187.00 +
289.00 +
221.00 +
1,868.00 *

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 1/74

CONTRACTOR: Rober Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): Appr. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 867 End shift: 886

BIT DATA:	#1	#2	#3
Serial No:	31649		
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bag mud. 6 qts Celler 6 qts Lignite
1 Bag Quik-Trol. 6 Gals diesel.

Water used: gal. Miles hauled Cost

REMARKS Ream 20' For No Shell & new
Bit - Christensen Bit.
Pull Rods & Change Bit.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges 19' @ 17.00
Mis'c charges

Shift Total $ 323.00

Driller: L Mondamin 10 hrs.
Helper C Abbott 10 hrs
Helper C Reddell 10 hrs.

Approved:

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 6 PM
Date: July 2/74

CONTRACTOR: Roler Smith Drilling County Lander State Nev
Mining District: Battle Mt. Group: 32 Claim:
Drill Hole No. 32-3-74
Location from section corner (or nearest Mineral Monument): App. N70°W 120'
From Drill Hole 32-1-74

Depth start shift: 886 End shift: 903

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used: 6 Bags mud 2 Bag Quik-Trol
3 qts Cellex 6 qts Lignite. 1/2 Bag ~~Highgel~~.
1/2 Bag Cotton Seed Hulls.
Water used: 5000 gal. Miles hauled 50 Cost

REMARKS
886 - 903

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges 7'
Mis'c charges
10' mistake under charge
Corrected 886
17' @ 17.00

Shift Total $ 289.00

Driller: L Mandrand 10 hrs
Helper G Abbott 10 hrs
Helper C Redden 10 hrs.

Approved: WJL

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

R. M. SMITH DRILLING LTD.

1446 Windsor Crescent

Delta, B.C.

943-4308

Invoice #4

To: Summa Corporation
Mining Division
P.O. Box 1126
Tonopah, Nevada 89049

Period: July 16th - 31st

Footage 971 - 1317 - 346' @ 17.00	$5,882.00	— OK. W.F.L.
Water Truck Rental - 2 weeks @ 100.00	200.00	— OK. W.F.L.
1 Barrel Soluble Oil	75.95	— out
2 NQ Outer Barrels @ 74.50 worn out reaming thru cave	149.00	OK. W.F.L.
TOTAL:	$6,306.95	

The company does not furnish additives according to our agreement.
Walt Lemin
less 75.95

0.00 *

2,125.00 +
3,604.00 +
2,916.00 +
1,868.00 +
5,882.00 +
16,395.00 *

R. M. Smith Drilling Ltd.

1446 WINDSOR CRESCENT
DELTA, B.C.
943 - 4308

July 1, 1974

Invoice #2

To: Summa Corporation
Mining Division
P.O. Box 1126
Tonopah, Nevada 89049

Period: June 15th - 30th

Footage 720 - 867 - 147' @ 17.00 - $2,499.00

June 20 - Standby @	100.00	
21 -	100.00	
27 -	100.00	$500.00
28 -	100.00	
29 -	100.00	

2 weeks water truck @ 100.00 per week - $200.00

June 18 - 12 - man hours @ 12.50 - 150.00

Reaming down new shell.

O.K. W.F.

TOTAL: $3,349.00

all Group 32

O.K. W.F.

R. M. Smith Drilling Ltd.

1446 WINDSOR CRESCENT
DELTA, B.C.
943 - 4308

Invoice #3

To: Summa Corporation
Mining Division
P.O. Box 1126
Tonopah, Nevada 89049

Period: July 1st - 15th

867 - 971	104' @ 17.00	1768.00
July 5 Standby @ 100.00 July 6 Standby @ 100.00 July 7 Standby @ 100.00		300.00
July 11 - 12 man hours reaming cave @ 12.50 per hour		150.00
July 14 - 6 man hours reaming cave @ 12.50 per hour		75.00
Water truck rental 2 weeks @ 100.00 per week		200.00
1 trip to Reno for bits - 450 miles @ .15 per mile		67.50
TOTAL:		2560.50

- ok. W.H.
- O.K.
- O.K.
- O.K.
- O.K.

W.H.

I agreed with Roger Smith to Pay for 500.00 standby time because of Bit heads and no more. so there should be 300.00 deducted from this Bill — Walt Smith

60002523 3020

STATEMENT

LYLE MALONE

CONSTRUCTION EQUIPMENT RENTAL

BOX 1527 PHONE 635-2378
BATTLE MOUNTAIN, NEVADA 89820

May 28, 1974

TO Summa Corporation
Tonopah
Nevada

Backhoe work for drill rig.
Move in and out. $125.00

4 hours Cat work @ $30.00 120.00

Total $245.00

Please remit

SUMMA CORPORATION
MINING DIVISION
Tonopah

JUN 3 1974

RECEIVED

Group-32

mud pits at Hole # 2 + 3

0032-0100-9241-11

O.K. Walt

Vegas 6/4/74

Internal Communication

summa

Date: April 24, 1974

To: Walt Simmons

From: Naomi Ellis

Subject: Assessment Work 1974

The amount of work completed on Group No. 32 $20,746.23

Group No. 31 - complete.

The bill on Silver State for hauling equipment (group 32) is not assessment charges.

Internal Communication

summa

Date: April 17, 1974

To: Walt Simmons

From: Naomi

Subject: Assessment Funds spent to date

Group No. 32	$13,495
Group No. 31	3,250 (need $50 more to complete)

HUGHES TOOL COMPANY
Nevada Mining Operations
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
_____M to _____M
Date: APRIL 4, 1974

P.O.Box 1527 Battle Mt., Nev

CONTRACTOR: MALONE CONSTRUCTION County LANDER State NEV.
Mining District: BATTLE MOUNTAIN Group: 32 Claim:
Drill Hole No. 32-5-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: End shift:

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS
CAT WORK TO DRILL SITE 32-5-74
4 hours @ $30/hr. + moving cost (bill separate)
$120.00

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges

Shift Total $ 120.00

Driller: Lyle Malone
Helper
Helper
Approved: [signature]

Casing Record:
from to
from to
Pulled from to
to

White Copy - Accounting Office Yellow Copy - Property Records Pink Copy - Geological - Las Vegas Green Copy - Contractor Goldenrod Copy - Rig

HUGHES TOOL COMPANY
Nevada Mining Operations
P. O. Box 1126
TONOPAH, NEVADA 89049

P.O.Box 1527 Battle Mt., Nev.

DAILY SHIFT REPORT
_____ M to _____ M
Date: APRIL 4, 1974

CONTRACTOR: MALONE CONSTRUCTION County LANDER State NEV.
Mining District: BATTLE MOUNTAIN Group: 32 Claim:
Drill Hole No. 32-1-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: End shift:

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: Pressure
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

BACKHOE WORK - DIGGING MUDPIT

Formation penetrated:

CONTRACT COSTS
Drilled footage charges
Cored footage charges
Mis'c charges

Shift Total $ 125.00

Driller: Lyle Malone
Helper
Helper

Approved: John Brady

Casing Record:
_____ from _____ to
_____ from _____ to
Pulled from _____ to
_____ to

White Copy - Accounting Office Yellow Copy - Property Records Pink Copy - Geological - Las Vegas Green Copy - Contractor Goldenrod Copy - Rig

Lyle Malone - Bx 1527 Battle Mtn. Nev.

summa

Internal Communication

Date: September 30, 1975

To: Bill Robertson

From: Bob Lutz

Subject: Copper Assays

Bill, at the last budget meeting, September 23-24, the various groups of Summa claims were discussed as they pertained to budget allocations. It was noted that Group 32N, Battle Mountain, and Group 31, Titan, were both drilled last year for copper potential but have not been tested for that element.

Mr. Gribbin asked me to see that the core from 32N is split and assayed for copper as well as the two rotary holes in Group 31. There is no point in doing any more work in these areas until we have the data already collected.

Let me know if you have any questions.

Bob Lutz

HUGHES TOOL COMPANY
Nevada Mining Operations
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

_____ M to _____ M
Date: _____

CONTRACTOR: _____ County _____ State _____
Mining District: _____ Group: _____ Claim: _____
Drill Hole No. _____
Location from section corner (or nearest Mineral Monument): _____

Depth start shift: _____ End shift: _____

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips: _____

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: _____ Pressure _____
Mud and additives used: _____

Water used: _____ gal. Miles hauled _____ Cost _____

REMARKS _____

Formation penetrated: _____

CONTRACT COSTS
Drilled footage charges _____
Cored footage charges _____
Mis'c charges _____

Shift Total $ _____

Driller: _____
Helper _____
Helper _____

Approved: _____

Casing Record:
_____ from _____ to _____
_____ from _____ to _____
Pulled from _____ to _____
_____ to _____

White Copy - Accounting Office Yellow Copy - Property Records Pink Copy - Geological - Las Vegas Green Copy - Contractor Goldenrod Copy - Rig

HUGHES TOOL COMPANY
Nevada Mining Operations
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

_____ M to _____ M
Date: _____

CONTRACTOR: _____ County _____ State _____
Mining District: _____ Group: _____ Claim: _____
Drill Hole No. _____
Location from section corner (or nearest Mineral Monument): _____

Depth start shift: _____ End shift: _____

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips: _____

From	to	Recovery	ft. Hours:

CIRCULATING FLUID: _____ Pressure _____
Mud and additives used: _____

Water used: _____ gal. Miles hauled _____ Cost _____

REMARKS _____

Formation penetrated: _____

CONTRACT COSTS
Drilled footage charges _____
Cored footage charges _____
Mis'c charges _____

Shift Total $ _____

Driller: _____
Helper _____
Helper _____

Approved: _____

Casing Record:
_____ from _____ to _____
_____ from _____ to _____
Pulled from _____ to _____
_____ to _____

White Copy - Accounting Office Yellow Copy - Property Records Pink Copy - Geological - Las Vegas Green Copy - Contractor Goldenrod Copy - Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

8 M to 4 M
Date: 26 July 74

CONTRACTOR: LONG DRILLING County LANDER State NEV
Mining District: BATTLE MT Group: 32 Claim:
Drill Hole No. 325-1-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: 0 End shift: 200

BIT DATA:	#1	#2	#3
Serial No:			
Make	GAULT		
Size	5¼		
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure AIR
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 200 FT at $7.00 PER FT
Cored footage charges
Mis'c charges

Shift Total $ 1400.00

Driller: J Long
Helper D Anthony
Helper J McVey
Approved: [illegible]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

0.00 *

0.00 *

1,400.00 +
385.00 +
1,400.00 +
1,400.00 +
840.00 +
1,015.00 +
6,440.00 *

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT
8 AM to 4 PM
Date: 27 July 74

CONTRACTOR: LONG DRILLING County LANDER State NEV
Mining District: BATTLE MT. Group: 325 Claim:
Drill Hole No. 325-2-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: 0 End shift: 55

BIT DATA:	#1	#2	#3
Serial No:			
Make	GAUZT		
Size	5¼		
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: Pressure AIR
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS DRILLED INTO OLD WORKINGS AT 55 FT

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 55 FT at $7.00 PER FT
Cored footage charges
Mis'c charges

Shift Total $ 385.00

Driller: J. Long
Helper D. Anthony
Helper J. McPeak
Approved: W.H.

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

8 M to 4 M
Date: 28 July 74

CONTRACTOR: LONG DRILLING County LANDES State NEV
Mining District: BATTLE MT Group: 32 Claim:
Drill Hole No. 325-3-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: 0 End shift: 200

BIT DATA:

	#1	#2	#3
Serial No:			
Make	Smith		
Size	5¼		
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: Pressure AIR
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 200 FT AT $7.00 PER FT
Cored footage charges
Mis'c charges

Shift Total $ ~~2800~~ 1400.00 JW

Driller: J Long
Helper D Anthony
Helper J Hilz
Approved: [illegible]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

8 M to 4 M
Date: 29 July 74

CONTRACTOR: Long Drilling County LANDER State NEV
Mining District: BATTLE MT Group: 32 Claim:
Drill Hole No. 32S-2B-74
Location from section corner (or nearest Mineral Monument):
12 FT EAST OF HOLE 32S-2-74

Depth start shift: 0 End shift: 200

BIT DATA:	#1	#2	#3
Serial No:			
Make	GAULT		
Size	5 1/4		
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: Pressure
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 200 ft at 7.00 per FT
Cored footage charges
Mis'c charges

Shift Total $ 1400 00

Driller: Jim Fong
Helper
Helper
Approved: W.F.

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

8 M to 4 M
Date: 30 July 74

CONTRACTOR: LONG DRILLING Co County LANDER State NEV
Mining District: BATTLE MT Group: 325 Claim:
Drill Hole No. 32-8-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: 0 End shift: 120

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:
From to Recovery ft. Hours:
to
to
to

CIRCULATING FLUID: AIR Pressure 200
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS BADLEY BROKEN - LOST CIRCULATION AT 65 ft.

Formation penetrated:

CONTRACT COSTS
Drilled footage charges 120 FT AT 7.00 PER FT
Cored footage charges
Mis'c charges

Shift Total $ 840.00

Driller: L. Long
Helper J. Chatham
Helper J. McDaley
Approved: [illegible]

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

SUMMA CORPORATION
Mining Division
P. O. Box 1126
TONOPAH, NEVADA 89049

DAILY SHIFT REPORT

8 AM to 4 PM
Date: 31-July 74

CONTRACTOR: LONG DRILLING Co County LANDER State NEV
Mining District: BATTLE MT Group: 325 Claim:
Drill Hole No. 325-8B-74
Location from section corner (or nearest Mineral Monument):

Depth start shift: 0 End shift: 145

BIT DATA:	#1	#2	#3
Serial No:			
Make			
Size			
Depth out			
Depth in			
Total Ft.			
Condition			

WIRE LINE CORE DATA: Number of trips:

From	to	Recovery	ft. Hours:
	to		
	to		
	to		

CIRCULATING FLUID: AIR Pressure 200
Mud and additives used:

Water used: gal. Miles hauled Cost

REMARKS

Formation penetrated: LIME

CONTRACT COSTS
Drilled footage charges 145 ft at 7.00 per ft
Cored footage charges
Mis'c charges

Shift Total $ 1015

Driller: J. Long
Helper J. Arthur
Helper J. McVey
Approved: WEL

Casing Record:
from to
from to
Pulled from to
to

Original — Summa Yellow — Contractor Pink — Rig

Land Exploration and Mining Division

March 7, 1974

Summa Corporation

Tonopah, Nevada

Re: Drilling Agreement

Summa Corp. (Walt Simmons) and Long Drilling Co. (Jim Long)
Tonopah, Nevada Carlin, Nevada

Drilling 0' to 1000' @ $7.00 per foot

Drilling 1000' and over $10.00 per foot

Coring $45.00 per hour and bit cost

Coring and additives extra

Bit cost for rotary drilling in excess of $1.00 per ft.
to be absorbed by Summa. Corp.

Walt Simmons

Jim Long

5700-B South Haven Street Las Vegas Nevada 89119 Area Code 702 739 7441

1975

Summa Diesel
Group 32 S

1/11	110	Sals
1/16	100	✓
1/17	100	✓
1/14	100	✓
1/15	50	✓
1/19	110	✓
1/10	55	✓
1/18	100	✓
1/20	100	✓
1/22	150	✓
1/23	100	✓
1/24	100	✓
1/25	50	✓
1/28	100	✓
	1325	
1/30	200	✓
1/31	150	✓
2/1	100	✓
2/3	100	✓
2/4	100	

1975

Summa Diesel
Gr. 32 S.

Bit. Ford 2/4	1975 GAL.
2/5	100 ✓
2/6	—
2/7	150 ✓
2/13	150 ✓
2/14	150 ✓
2/17	150 ✓
2/18	150 ✓
2/19	100 ✓
20	100 ✓
24	100 ✓
25	150 ✓
26	150
	3425

1975

Diesel Purchased

Bell Court Service
Battle Mt.

1/3 - 1/22	1893 gals
Feb	1690
	3583

DRILLING

LONG ~~CONSTRUCTION~~ COMPANY

P. O. Box 732
Carlin, Nevada 89822
Phone 754-6556

March 31, 1974

Mr. Walt Simmons
Summa Corporation
P. O. Box 1126
Tonopah, Nevada 89049

MARCH BILLING

Battle Mountain Jobsite

Hole # 32-1-74	450 ft.	
Hole # 32-2-74	520 ft.	
Hole # 32-3-74	380 ft.	
Total	1,350 ft. @ $7.00 per ft.	$9,450.00

Mis'c. charges:

40 ft. casing @ $2.90 per ft.	116.00
1 bag cement	2.34
Total Billing	$9,568.34

Jim Day

Thank you,
LONG DRILLING CO.

0032 ~~0271~~ 0100 9549

SUMMA CORPORATION
MINING DIVISION
Tonopah

APR 3 1974

RECEIVED

O.K.

JDL

DRILLING
LONG ~~CONSTRUCTION~~ COMPANY

P. O. Box 732
Carlin, Nevada 89822
Phone 754-6556

November 4, 1974

Mr. Walt Simmons
Summa Corporation
P. O. Box 1126
Tonopah, Nevada 89049

October Billing

Cleaning @ casing Hole # 32-6-74 38 Hr's @ $45.00 per hr.	$1,710.00
Mobilization: Rawhide to Battle Mt. round trip. 310 miles @ $1.50 per mile.	480.50
Total Billing	$2,190.50

Thank you,

Jim Long

Long Drilling Co.

O.K.
W.S.
group 32

#6

Vegas 11/7

JDL/gl

Long Drilling Company

P. O. Box 732
CARLIN, NEVADA 89822

Phone 754-6556

January 14, 1975

Mr. Walt Simmons
Summa Corporation
P. O. Box 1126
Tonopah, Nevada 89049

Core Rig Rent from November 14, 1974 to December 20, 1974
36 days at $83.33 per day $ 2,999.88

Water truck rent 36 days at $16.66 per day 599.76

$ 3,599.64

Thank you,

Jim Long

Long Drilling Company.

Group 32 Rental

Long Drilling Company

P. O. Box 732
CARLIN, NEVADA 89822

Phone 754-6556

March 4, 1975

Mr. Walt Simmons
Summa Corporation
P. O. Box 1126
Tonopah, Nevada 89049

Drilling for February 32-S-75

Hole #	Footage at $3.00 per foot	Footage at $4.00 per foot
34	200	
82	40	
81	200	100
44	200	100
42	200	100
43	45	
41	200	100
48	200	100
47	200	100
46	200	100
35	200	100
75	200	
33	200	100
30	200	100
45	200	100
31	200	100
32	200	100
	3085	1300

3085 Ft. @ $3.00	$ 9,255.00
1300 Ft. @ $4.00	5,200.00
	$14,455.00

Thank you,

Jim Long

Long Drilling Company

O.K. W.S.
gr. 32

SUMMA CORPORATION
MINING DIVISION
Tonopah

MAR 7 1975
RECEIVED

Vegas 3/10

Long Drilling Company

P. O. Box 732
CARLIN, NEVADA 89822

Phone 754-6556

February 10, 1975

Mr. Walt Simmons
Summa Corporation
P. O. Box 1126
Tonopah, Nevada 89049

Drilling for January 32-S-75

Hole #	Footage at $3.00 per foot	Footage at $4.00 per foot
5	200	50
1	200	100
2	65	
2A	200	100
4	200	
3	200	125
15	200	100
38	200	
39	200	100
40	200	100
14	200	
13	200	100
12	200	
6	200	100
7	200	50
8	200	100
9	200	50
10	200	100
	3465	1175

3465 ft. @ $3.00	$ 10,395.00
1175 ft. @ 4.00	4,700.00
Cost of rebuilding Hole reamer (loaned to Summa)	750.00
	$ 15,845.00

Thank you,

Jim Long

Long Drilling Company

gr. 32
expl. drilling
O. K. WPL

Vegas
2/13

Tom's Bit Service

209 NORTH CHESTER AVENUE
BAKERSFIELD, CALIFORNIA 93308

Invoice Date	Invoice No.
2/6/75	1344

SOLD TO
Long Drilling Co.
P.O. Box 732
Carlin Nevada 89822

DELIVERED TO

Date Sold	Ticket No.	Party No.		Salesman	P. O. No.
2/3/75	1199			Geo. Brown	

Quantity		Description	Unit Price	Amount
1	15¼	Reamer Rebuilt	750.00	750.00

O.K. ~~[illegible]~~ gr. 26 - water well
W.F.L.
Hole Reamer - Loaned

INVOICE

Long Drilling Company

P. O. Box 732
CARLIN, NEVADA 89822

Phone 754-6556

March 25, 1975

Mr. Walt Simmons
Sunna Corporation
P. O. Box 1126
Tonopah, Nevada 89049

Drilling for March 1975

Hole #	Footage at $3.00 per foot	Footage at $4.00 per foot
32S-43B75	200	150
32S-49-75	200	150
32S-84-75	200	100
	600	400

600 Ft. @ $3.00		$ 1,800.00
400 Ft. @ 4.00		1,600.00
		3,400.00
Less --Diesel	220 gal. @ 33.8 per gal	- 74.36
		$ 3,325.64

Thank you,

Jim Long

Long Drilling Company

P.O. 32
Dulles
A.R. Mfl.