

B. 1. b. (Strat 62-21). 2

Main Map 62-21 (6)

Coordinates T 4

Type Drill \_\_\_\_\_

Bit Size \_\_\_\_\_ Box

Sheet No. 1

Date Started \_\_\_\_\_

Date Completed \_\_\_\_\_

PHILLIPS PETROLEUM CO.

Collar Elevation \_\_\_\_\_

Total Footage \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Logged By SMITH

**GEOLOGIC LOG**

FROM	TO	FT. OF CORE	WEB	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION			SECTION DEPTH
486.5	501		1	BASALT - M. Gray; s.l. vesicular; CINDER 494-5 v. fn. x11N				
501	502		2	BASALT - AA				BASALT
502	507		2	BASALT RUBBLE				
507	511		2	BASALT - AA ex v. vesicular				
511	521	*	3-4	BASALT - AA less ves. and 519 - becoming v. massive				
521	564	P	4-8	BASALT - AA				
564	568	*	8	CINDER - red; occ. block of basalt;				CINDER
568	574.5		9	CINDER - AD				
574.5	581	*	9	v. Ash - reddish gray to dk gray - soft w/ blocks of basalt; occ ves. basalt				
581	591	<del>*</del>	10	v. Ash - AA - debris flow / Lahar				
591	600		11	v. Ash / debris flow - AA				LAHAR
600	608		12	Debris flow / Lahar				
608	618.5		13	Debris flow / Lahar matrix becoming hard				
618.5	627.5		14	Lahar matrix becoming redder				
627.5	636.5		15	Lahar				
636.5	645		16	Lahar				
645	655		17	Lahar				
655	663	*	18	Lahar				
663	672		19	Lahar				

Note No. 62-21

Coordinates \_\_\_\_\_

Type Drill \_\_\_\_\_

Bit Size \_\_\_\_\_

Sheet No. 2

Date Started \_\_\_\_\_

Date Completed \_\_\_\_\_

PHILLIPS PETROLEUM CO.

Collar Elevation \_\_\_\_\_

Total Footage \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Logged By \_\_\_\_\_

**GEOLOGIC LOG**

FROM	TO	FT. OF CORE	TYPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION			SECTION DEPTH
685	695		22	Lahar - AA				
695	701.5		22	BASALT - M-dk gray; st. porph; v. vesicular				
701.5	711		23	BASALT - AA				
711	712	*	24	BIKASI - AA				Altered Basalt
712	720		24	Altered Andesite? - dk. greenish gray; soft to hard; porphyritic; altm?; CDZ in place				
720	729		25	Altered Andesite - AA ex 90% hard				
729	739	*	26	Altered Andesite - AA				
739	747.5		27	Altered Andesite/Basalt - grades into "fresh" basalt at 741				
747.5	757	*	28	Altered Basalt - grades into more porphyritic altered basalt at 750. V. sm. disseminated vesicles at 755 along fracture surfaces plus or opaline? filling				
757	766.5	?	29	Altered Basalt - AA grades into fresh basalt at 766.5				
766.5	776		30	Altered Basalt - AA				
776	785.5		31	Altered Basalt - AA				
785.5	795		32	ABASALT - M. gray - v. fin xtln; massive; no vesicles;				
795	803.5		33	Altered Basalt - fresh to 797 then back to vesicular altered softer basalt to 803.5				
803.5	813		34	Altered Basalt - v. fine vein filling and occ. pyrite still present in altered basalt				
813	822.5	*	35	Altered Basalt - grades into fresh at 816				
				with Basalt - fresh 822.5 - 832				

Note No. 62-21

Coordinates \_\_\_\_\_

Type Drill \_\_\_\_\_

Bit Size \_\_\_\_\_

Sheet No. 3

Date Started \_\_\_\_\_

Date Completed \_\_\_\_\_

PHILLIPS PETROLEUM CO.

Collar Elevation \_\_\_\_\_

Total Footage \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Logged By \_\_\_\_\_

**GEOLOGIC LOG**

FROM	TO	FT. OF CORE	TYPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION	SECTION DEPTH
832	841.5		37	Alt. Basalt - fresh to 834 - altered to surface light w/ E vein like material in matrix		Alt. Basalt
841.5	851		38	Alt. Basalt - altered to 851 - no pyrite - looks like water deposits above w/ light vein filling		
851	861		39	Alt. Basalt - altered to 853 fresh to 861		
861	870.5		40	Alt. Basalt - fresh to 870.5		
870.5	871		41	Alt. Basalt - fresh to 871		
871	881	*	41	Basalt Breccia - Matrix to reddish gray; matrix fragment material is reddish gray; light (CO <sub>2</sub> ) filled vein filling - hard		Breccia
881	883.5		42	Basalt Breccia - AA		
883.5	890	*	42	Altered Basalt - See above ext. matrix		ALT BASALT
890	891		44	Altered BASALT - AA		
891	892.5	*	44	CINDERS - RED - hard		CINDER
892.5	899		44	BASALT - Md gray; v. tn. xtlw, no phen obs.; massive w/ no vesicles; white, mammillary vein filling at 894.5		BASALT
899	927	?	45-47	BASALT - AA		
927	927.5		48	BASALT - AA		
927.5	936.5	*	48	CINDER - Reddish gray to red; vesicular; hard to soft		
936.5	945.5		49	CINDER/Rubble - AA mostly gray		
945.5	950		50	CINDER/ASH - AA - gray - soft		
950	954		50	BASALT - See above No. 10		BASALT

NO. 13 X 93

Hole No. 62-21

Coordinates \_\_\_\_\_

Sheet No. 4

PHILLIPS PETROLEUM CO.

Date Started \_\_\_\_\_

Collar Elevation \_\_\_\_\_

Type Drill \_\_\_\_\_

Date Completed \_\_\_\_\_

Total Footage \_\_\_\_\_

Bit Size \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Logged By \_\_\_\_\_

**GEOLOGIC LOG**

FROM	TO	FT. OF CORE	TYPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION		SECTION DEPTH
954	955.5	*	51	BASALT - AA			BASALT
955.5	960	*	51	CINDER - RED			CINDER
960	963		51	BASALT RUBBLE			RUBBLE
963	965		52	BASALT RUBBLE			
965	972		52	BASALT - M. Gray; vesicular; fn x 1/4"; med broken			BASALT
972	976	*	53	BASALT - AA			
			53	Altered lithic tuff = greenish gray; soft matrix; frag of basalt, pumice; makes long core			
976	1000.5	P	54-56	Altered lithic tuff - AA blocks of basalt get larger; occ. cinder blocks			lithic tuff
1000.5	1009.5		56	BASALT - med dk gray; irregular to massive; sl. green alter present; occ. white vugs (vesicles) hollow			BASALT
1009.5	1026.5	*	57-58	BASALT - AA becomes more massive at bottom			
1026.5	1029		58	Vol. Ash - reddish gray to dk gray; soft to hard; lithic in places.			Ash
1029	1038	*	59	V. Ash - AA			
1038	1052		60-61	V. Ash AA			
1052	1056		61	Altered lithic tuff - rd at top grading into M. green tuff; lithic w/ pumice, basalt, cinder frag; soft to hard			
1056	1066	P	62	Altered lithic tuff AA			

Main No 62-21

Coordinates \_\_\_\_\_

Type Drill \_\_\_\_\_

Bit Size \_\_\_\_\_

Sheet No 5

Date Started \_\_\_\_\_

Date Completed \_\_\_\_\_

PHILLIPS PETROLEUM CO.

Collar Elevation \_\_\_\_\_

Total Footage \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Logged By \_\_\_\_\_

**GEOLOGIC LOG**

FROM	TO	FT. OF CORE	TYPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION			SECTION DEPTH
10675	1076		63	BASALT - dk gray; porphyritic; vesicular grading to massive; green mineral in vugs.				BASALT
1076	1085.5	P	64	BASALT - AA				
1085.5	1094		65	BASALT - AA				
1094	1104		66	BASALT - AA				
1104	1106		67	BASALT - AA				
1106	1114	*	67	CINDER - red-gray; hard				CINDER
1114	1123.5		68	CINDER - AA				
1123.5	1150.6	P <sup>2</sup>	69-71	BASALT/ANDESITE - lt gray; massive; porph; altered from 1145 - 1150.5 (white vein filling); pyrite present in altered zone.				MINERALIZED ANDESITE
1150.5	1159.5		72	ANDESITE - AA altered through 1152.5				
1159.5	1169		73	ANDESITE - AA				
1169	1178	*	74	ANDESITE - AA <sup>occ.</sup> opal in vugs too				
1178	1187		75	ANDESITE - AA				
1187	1196		76	ANDESITE - AA rubble zones at 1191-1196 1184-86				
1196	1205.5		77	ANDESITE - AA				
1205.5	1216		78-80	ANDESITE - AA				
1216	1234		80	V. Ash/Lahar - red to gray; soft to hard; occ green alter.				V. ASH LAHAR
1234	1243.5	*	81	V. Ash/Lahar - AA				
1243.5	1261		82-83	V. Ash/Lahar - AA				
1261	1265		84	V. Ash/Lahar - AA				
1265	1270.9		84	ANDESITE - See above				ANDESITE

Hole No. 62-21

Coordinates \_\_\_\_\_

Sheet No. 6

PHILLIPS PETROLEUM CO.

Collar Elevation \_\_\_\_\_

Date Started \_\_\_\_\_

Total Footage \_\_\_\_\_

Date Completed \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Type Drill \_\_\_\_\_

Logged By \_\_\_\_\_

Bit Size \_\_\_\_\_

**GEOLOGIC LOG**

FROM	TO	FT. OF CORE	TYPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION			SECTION DEPTH
1275	1280		85	ANDESITE - AA				
1280	1307.5	86	86-88	ANDESITE - AA				BASALT / ANDES
1307.5	1373.5	P	89-96	TRINCHITE (BASALT) - AA				
1373.5	1382	*	96	TRINCHITE / RUBBLE - Red - Brown solid / massive texture, reworked				CINDER
1382	1390		97	RUBBLE / AA				
1390	1415		97	BASALT - M. dk gray; m. vesicular; CO <sub>2</sub> ? in vesicles and along fractures				BASALT
1391.5	1400.5	*	98	BASALT - AA massive				BASALT
1400.5	1438.4		99-102	BASALT - AA massive w/v fine vesicles				
1438	1462		103-105	BASALT - AA				
1462	1465		105	CINDER - Red				CINDER
1465	1469	*	106	CINDER - AA				
1469	1473.5		106	BASALT - M Gray; v. fa. v. l. w; sl. greenish alter.				
1473.5	1482.5		107	BASALT - AA Clayed 1474-755				BASALT
1482.5	1600.5	P	108-120	BASALT - AA NO CLAY v. hard massive				BASALT
			121	BASALT - AA				
		*	122	BASALT - HA				
1619	1623		123	BASALT - AA				
1623	1631		123	V. Ash - reddish orange. mod. hard, occ. l. frags.				
1631	1640		124	V. Ash - AA rubble to 1636 - 40 becoming dk gray @ 1636				V. ASH
1640	1649	*	125	V. Ash - AA flabby				
1649	1649.5		126	V. Ash - AA				

Hole No. 62-21

Coordinates \_\_\_\_\_

Sheet No. 7

PHILLIPS PETROLEUM CO.

Date Started \_\_\_\_\_

Casing Elevation \_\_\_\_\_

Type Drill \_\_\_\_\_

Date Completed \_\_\_\_\_

Total Footage \_\_\_\_\_

Bit Size \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Logged By \_\_\_\_\_

## GEOLOGIC LOG

FROM	TO	FT. OF CORE	TYPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION			SECTION DEPTH	
1649.5	1658.5	P	126	ANDESITE - M JK gray; massive; v. fine grained; white xtl material in veins and veins					ANDESITE
1658.5	1708		127-133	ANDESITE - AA					
1708	1712	*	133	Flow - looks like altered - dark; flaggy; - fl					Flow
1712	1715.5		133	ANDESITE FLOW BRECCIA - Same as above & brecciated w/ matrix of andesite; hard; massive					
1715.5	1738	P	134-136	ANDESITE F.B. - AA					
1738	1748.5		136	ANDESITE <sup>FB</sup> OK gray; v. fine grained; massive; white xtl material in veins & veins					
1748.5	1753		137	ANDESITE FB - occ. lithic frag fossils					
1753	1762.5		138	ANDESITE FB - AA					
1762.5	1772	P	139	ANDESITE FB - AA v. abundant fracture filling w/ white material					
1772	1781.5		140	ANDESITE FB - AA					
1781	1810	*	141-143	ANDESITE BRECCIA - AA white material becomes low common @ 1808					
1810	1910.5	P	143-153	ANDESITE BRECCIA - looks like flow breccia m - white xtl material in occ found.					
1910	1913		154	Andesite flow breccia, angular clasts of same andesitic comp frags filled w/ soft white material w/ same consistency as Styrofoam - (Cooked polymer? or zeolite?)					
1913	1922		155	Andesite flow breccia, AA					
1922	1930.5	*	156	Andesite flow breccia -> Andesite					

Hole No. C2-21

Coordinates \_\_\_\_\_

Sheet No. 8

PHILLIPS PETROLEUM CO.

Collar Elevation \_\_\_\_\_

Date Started \_\_\_\_\_

Total Footage \_\_\_\_\_

Type Drill \_\_\_\_\_

Date Completed \_\_\_\_\_

Overall Core Recovery \_\_\_\_\_

Bit Size \_\_\_\_\_ BOX

**GEOLOGIC LOG**

Logged By \_\_\_\_\_

FROM	TO	FT. OF CORE	SHAPE	ROCK DESCRIPTION, ALTERATION AND REMARKS	METALLIZATION			SECTION DEPTH	
1439.5	1449		158	Andesite/Andesite flow breccia AA					
1449	1459		159	" " " " "					
1459	1468		160	" " " " "					
1468	1977.5	*	161	" " " " "					
1977.5	1987		162	" " " " "					
1987	1996		163	Andes/Andes flow breccia grading to dk red Andesite					
1996	2003		164	dk red to grey andesite, lots of soft white fract filling material					
2003	2006		164	dk grey andesite, highly chloritized, especially on fracture surfaces					
2006	2014	*	165	Andes/basalt dk grey to black on fresh surf's, fine grnd					
2014	2023		166	Basalt AA					
2023	2032		167	" "					
2032	2041		168	Basalt/Andes, dk, fine grnd					
2041	2050.5		169	" " " " "					
2050	2060		170	" " " " " white fract fill, v. soft like styrofoam					
2060	2069		171	Andesite, dk grey to purple, fine grnd					
2069	2078.5		172	" " " " "					
2078.5	2082		173	Basalt, black, very fine grnd					
2082	2082.5		173	Basalt, v. finely banded, silica veins at 2084					
2082.5	2096		174	Basalt, fresh but highly fractured, trace of fract filling					
2096	2104.5	*	175	Basalt AA to 2102.5 Andesite to 2104.5					
2104.5	2114		176	Andesite, lt. purple to dk grey					
2114	2123	*	177	" " " " "					
2123	2125		178	Andesite AA → fine grnd blk basalt					
2125	2125	✓	178	" "					

FLOW BRECCIA

A/B?

BASALT

ANDESITE

BASALT