WELL LOG AND REPORT TO THE STATE ENGINEER OF NEVADA

Log No. 3808
Rec. June 18 1957
Well No.
Permit No.
Do not fill in

Owner: Stauffer Chemical Company
1415 So. 47th Street
Address: Richmond, California

Driller: Casey & Montgomery
P. O. Box 1102
Address: Bakersfield, Calif. Lic. No.

Location of well: SE ¼ SE ¼ Sec. 34, T 21 N/S, R 62 E, in Clark County

or

Mineral prospecting hole for solid salt.

Total depth of well 2158

Size of drilled hole 10-5/8 inch

Weight of casing per linear foot

Thickness of casing None

Temp. of water None

Diameter and length of casing 16½" conductor pipe to 26 ft.
(Casing 12" in diameter and under give inside diameter; casing 12" in diameter give outside diameter.)

If flowing well give flow in c.f.s. or g.p.m. and pressure None

If nonflowing well give depth of standing water from surface

If flowing well describe control works
(Type and size of valve, etc.)

Date of commencement of well 5/20/57 Date of completion of well 5/27/57

Type of well etc. Rotary oil well type

LOG OF FORMATIONS

From feet	To feet	Thickness feet	Type of material
0	50	50	Basaltic conglomerate
50	650	600	Red, brown, gray, tan and green gravel and soft mudstone becoming more sandy towards the bottom
650	870	220	Abundant chert and sandstone
870	1310	440	Fine grain sandstone, mudstone with some shale
1310	1560	250	Tuffaceous sandstone and some mudstone
1560	1610	50	Basaltic lava
1610	1850	240	Volcanic ash, tuff and volcanic conglomerate with local clay
1850	1870	20	Lava, probably andesitic
1870	2158	288	Volcanic tuff and ash with interbedded clay
			Bottomed.

A more complete log of this hole is attached.

Water-bearing Formation, Casing Perforations, Etc.

Chief aquifer (water-bearing formation) from to ft.

Other aquifers

Depth water at feet.

Casing perforated from to ft.

Size of perforations

LOG OF FORMATIONS—*Continued*

From feet	To feet	Thickness	Type of material

CASING RECORD

Diam. casing	From feet	To feet	Length	"Remarks"—Seals, Grouting, Etc.

GENERAL INFORMATION—Pumping Test, Quality of Water, Etc.

WELL DRILLER'S STATEMENT

This well was drilled under my jurisdiction and the above information is true to my best information and belief.

Signed _____
Well Driller

By _____

License No. _____

Dated _____, 19____

(Not to be filled in by Driller)

STAUFFER CH[illegible]CAL COMPANY

LOGGED E. Mannion PROPERTY _____ DRILL HOL[illegible] H[illegible]

BEGUN 5/2[illegible]/57 FINISHED 5/27/57 LOCATION SE¼ SE¼ Sec 34 T 21 S R 62 E ELEVATION 1679.7 DEPTH 2158 ORE [illegible]

FOOTAGE FROM	FOOTAGE TO	RECOVERY	FORMATION	COLOR	TEXTURE	MINERALS	DIP	ASSAY	REMARKS
0	50	Cuttings	Overburden	Black + Gray	Basaltic sand, gravel and boulders				30' of conductor pipe in ground. 16" I.D. Boulders kept falling into hole
50	100	"	Muddy Ck	Red Brn	Silty clay + mudstone.				10 5/8 inch drill hole
100	130	"	" "	Red Brn	Silty clay and mudstone with some gray and black basalt fragments				
130	190	"	" "	" "	Silty mudstone + bare trace gypsum	Gypsum			
190	230	"	" "	Tan	Silty mudstone				
230	290	"	" "	Red Brn	Silty mudstone				
290	330	"	" "	" " + Brn	Mudstone and soft brown sandstone				
330	350	"	" "	Brown Lt Gray	Mudstone				
350	370	"	" "	Tannish Gy to Gy	Mudstone and gray soft sandstone				
370	390	"	" "	Gray + Tan	Mudstone + tan anhydrite	Anhydrite			
390	410	"	" "	Green	Clay				
410	430	"	" "	Grnish Gy + Grn	Greenish gray hard siltstone and softer green clay				
430	465	"	" "	Tan + White	Clay w/ abundant selenitic gypsum	Gypsum			
465	475	"	" "	Tan, white + green	Tan mud and claystone tr green clay, abu. selenitic gypsum.	Gypsum			
475	485	"	" "	Red Brn	Mudstone, trace green clay				
485	495	"	" "	Brown + Gy	Mudstone with some anhydrite	Anhydrite			
495	505	"	" "	Brown	Mudstone trace green clay				
505	560	"	" "	"	Mudstone				At 520' Hard gray ss
560	580	"	" "	" + Gray	Mudstone and harder siltstone + gray siltstone				At 580 L Gy tuff + Gy Brn gritty shale.

STAUFFER CHEMICAL COMPANY

LOGGED BY L. E. Mannion PROPERTY _____ DRILL HOLE NO. HSC-4

BEGUN 5/21/57 FINISHED 5/27/57 LOCATION SE¼ SE¼ Sec 34 T21S R62E ELEVATION 1627.7 DEPTH 2150 ORE —

FOOTAGE FROM	FOOTAGE TO	RECOVERY	FORMATION	COLOR	TEXTURE	MINERALS	DIP	ASSAY	REMARKS
580	600	Cuttings	Muddy Ck	Gray + Gy Brn to white	Gray mudstone w/some light gray tuff, gray brown shale + gray sandstone				
600	620	"	" "	Gray + Brown	Brown mudstone, gray shale and some gray sandstone				
620	640	"	" "	Gray + tan	Soft sandstone + shale				
640	660	"	" "	Green	Massive clay				
660	680	"	" "	Brown	Brown mudstone, some dark gray and red chert and basalt pebbles				
680	700	"	" "	Brown, Gy Brn + Light Gy	Dark gray and red brown chert and basalt pebbles + cobbles light gray sandstone and brown clay				
700	720	"	" "	Gray, L Gy Brn	Gray and brown chert + light gray sandstone				
720	780	"	" "	Light Brn buffs light Gy	L Brn, buff + tan chert (abundant) some light gray sandstone + tan mudstone				
780	800	"	" "	Light Gy	Fine grained fairly hard ss w/ chert				
800	880	"	" "	L Grnish Brn + Gy tan	Greenish brown abundant chert and grayish tan mudstone				
880	900	"	" "	Gray to Brnish Gy	Gray clay and silty soft sandstones				
900	920	"	" "	Brown + Green	Brown + green mudstone + clay				
920	940			Brown, green + L Vl Gy	Clay, bentonitic clay + tuff also green fine sandy siltstone.				
940	960	"	" "	Grn + Brn Some Dk Brn	Green + brn mudstone, green material is grainy + tuffaceous appearing. Trace dark brown				

STAUFFER CHEMICAL COMPANY

LOGGED BY J.E. Mannion
BEGUN 5/21/57 FINISHED 5/27/57
PROPERTY
LOCATION SE¼SE¼ Sec 34 T21S R62E ELEVATION 1629.7
DRILL HOLE NO. HSC-4
DEPTH 2158 ORE —

FOOTAGE FROM	FOOTAGE TO	RECOVERY	FORMATION	COLOR	TEXTURE	MINERALS	DIP	ASSAY	REMARKS
—	960	Cuttings	Muddy Ck		Fine sandstone & chert				
960	980	Cuttings	" "	Brn & Grn	Brown & green mudstone				
980	1000	"	" "	L Gy Grn	Mudstone & shale				
1000	1020	"	" "	L Gray, Tr Grn	Gray clay w/ trace green shale				
1020	1040	"	" "	Gray Brn, Tr Grn	Shale and mudstone trace sandstone and green shale				
1040	1060	"	" "	Gray Brn, Gray Grn	Shale & mudstone and gray to gray green sandstone (limy)				
1060	1080	"	" "	Brn & Gy	Gray fine sandstone and brown mudstone				
1080	1100	"	" "	Gy Green & Brown	Brown & gray green shale, local brown sandstone				
1100	1120	"	" "	Gray & white	Sandstone, fine grained, some shale and dense gray-white limestone				
1120	1140	"	" "	Gray	Speckled black & gray tuff w/ some limestone				
1140	1160	"	" "	Blue Grn & gray	Shale, soft gray clay & tuff ls				
1160	1220	"	" "	Gray & brown	Limy gray clay & shale, local buff limestone and brown shale				
1220	1240	"	" "	Gray	Silty and sandy limy shale				
1240	1260	"	" "	Gray	Sandy mudstone limy				
1260	1280	"	" "	"	Rather soft fine gray sandstone				
1280	1300	"	" "	"	Medium fine grained rather soft clayey sandstone w/ some speckled gray & black				
1300	1320	"	" "	"	Medium grained, harder volcanic ash & tuff with abund. black speckling, some volcanic breccia fragments	Biot & Augite			
1320	1360	"	"	Gray	Somewhat clayey tuffaceous sandstone & tuff, locally hard				

STAUFFER CHEMICAL COMPANY

LOGGED BY E. Mannion
PROPERTY
DRILL HOLE No. HSC-4
BEGUN 5/21/57 FINISHED 5/27/57 LOCATION SE¼ SE¼ Sec 34 T21S R62E ELEVATION 1677.7 DEPTH 2158 ORE —

FOOTAGE FROM	FOOTAGE TO	RECOVERY	FORMATION	COLOR	TEXTURE	MINERALS	DIP	ASSAY	REMARKS
1360	1380	Cuttings	Muddy Ck	Gray	Gray hard medium grained tuffaceous sandstone w/ some conglomerate.				
1380	1400	"	" "	"	Tuffaceous sandstone, hard speckled black				
1400	1420	"	" "	Gray + Black-Gra	Tuff + ash w/ blue green clay				
1420	1440	"	" "	Gray + Brown	Medium grained, medium hard tuffaceous sandstone				
1440	1450	"	" "	Gray + Brown	Medium fine grained ~~fine~~ brown sandstone + gray tuff				
1450	1460	"	" "	Blue Gy	Very hard fine grained tuffaceous sandstone.				
1460	1520	"	" "	Blue Gy	Clayey hard sandstone + some medium grained tuffaceous sandstone.				
1520	1540	"	" "	Brown + Gray	Dominantly silty mudstone w/ some fine grained gray sandstone.				
1540	1560	"	" "	Brown	Silty chocolate brown mudstone + ss w/ some black lava fragments				
1560	1580	"	" "	Black + Gray	Amygdaloidal rather fine grained basalt w/ some gray clay + trace olive green chert				Felsitic lava
1580	1600	"	" "	Black	Basalt with some greenish white vein in filling				" "
1600	1620	"	" "	Black + Gray	Felsitic basalt? (latite?) with some gray clay				" "
1620	1640	"	" "	Gray	Hard f. medium grained speckled volcanic tuff Trace basalt.				
1640	1700	"	" "	Gray	Hard volcanic tuff medium grained				

STAUFFER CHEMICAL COMPANY

LOGGED BY E. Mannion
BEGUN 5/21/57 FINISHED 5/27/57
PROPERTY
LOCATION SE¼ SE¼ Sec 34 T21S R62E ELEVATION 1679.7
DRILL HOLE NO. HSC-4
DEPTH 2158 ORE —

FOOTAGE FROM	FOOTAGE TO	RECOVERY	FORMATION	COLOR	TEXTURE	MINERALS	DIP	ASSAY	REMARKS
1700	1740	Cuttings	Muddy Ck	Gray	Hard volcanic tuff, medium fine grained, trace light brown siltstone				
1740	1760	"	"	"	Medium hard medium fine grained tuff				
1760	1800	"	"	"	Medium hard gray tuff with more clay than above; some lava fragments				
1800	1820	"	"	Gray + Gy Green	Volcanic tuff, portions appear clayey, some lava pebbles present				
1820	1840	"	"	Gray + Gray Grn	Volcanic tuff with abundant gray green clay				
1840	1860	"	"	Dark gy + gray	Felsitic lava with some gray + brown clay				
1860	1920	"	"	Gray, Lo Gray	Volcanic tuff and ash, local fragments of chert and volcanics; clayey with greenish clay				
1920	1940	"	"	Gray + Gy Grn	Clayey mottled gray + green tuff, black speckled tuff, local volcanic breccia				
1940	1960	"	"	Gray + Gy Grn	Same with more ~~vol~~ volcanic breccia				
1960	1980	"	"	Gray + Gy Grn	Rather vuggy medium hard and clayey tuff and tuff breccia				
1980	2000	"	"	Gray + Gy Grn	Medium hard clayey tuff				
2000	2020	"	"	Gray	Somewhat clayey + vuggy tuff with light greenish white coatings in vugs.				
2020	2060	"	"	Gray	Vuggy volcanic tuff w/some variable gray clay + brown sandstone				

STAUFFER CHEMICAL COMPANY

LOGGED BY E. Mannion PROPERTY _____ DRILL HOLE NO. MSC-4

BEGUN 5/21/52 FINISHED 5/23/52 LOCATION SE¼ SE¼ Sec 34 T2N R62E ELEVATION 1629.7 DEPTH 2158' ORE —

FOOTAGE FROM	FOOTAGE TO	RECOVERY	FORMATION	COLOR	TEXTURE	MINERALS	DIP	ASSAY	REMARKS
2060	2158	Cuttings	Muddy Ck	Gray	Vuggy volcanic tuff w/ andesitic fragments & volcanic glass.				
T.D. 2158									