H. W. ADDINGTON & ASSOC.

FEEMSTER 3352-15-5

SW/NW Sec. 15-33S-52W

Las Animas County, Colo.

JOSEPH R. CLAIR
Geological Consultant
C.P.G. #713
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WELL SUMMARY

Operator:	H. W. Addington & Assoc.
Well:	Feemster 3352-15-5
Location:	SW/NW Section 15, Township 33 South, Range 52 West, Las Animas County, Colorado.
Field:	Wildcat.
Elevation:	5327' Ground, 5338' K.B.
Spudded:	February 1, 1975 at 1:45 P.M.
Completed:	Approximately May 15, 1975.
Casing:	10 3/4" set at 226'. 7" set at 1400'. 5 1/2" set at 2016'.
Cores:	None.
Drill Stem Tests:	None.
Total Depth:	2400' - Driller & Schlumberger.
Mud Logging:	Monaco Engineering, Inc. - Jim Schellhase, Logging Engineer.
Air Equipment:	Ingersoll-Rand - Two 1500 CFM Compressors, mist pump and related equipment.
Logs:	Drilling Time Log - 235' to 1700' Detailed Sample Log - 293' to 2400' Schlumberger Electric Logs: Gamma Ray-Neutron - 100' to 1912' Dual Induction-Laterolog - 2012' to 2400' Simultaneous Compensated Neutron-Formation Density Log - 2012' to 2400'
Contractor:	Signal Oilfield Services, Inc. - Rig #8 Buck Taylor - Tool Pusher
Equipment:	Mast: Ideco 96' telescoping derrick - 212,000# capacity Drawworks: Ideco H-37, Drive-in with double drum Power: One 8V-71 GMC diesel motor - 250 HP through Allison torque converter. Pump: Gardner-Denver FXK - 14" x 5 1/2" Power: 671 GMC twin Diesels. Drill Collars: 20 - 5 3/4" x 2 1/4" - 590" Drill Pipe: 3 1/2" IF with 4 1/2" OD collars
Status:	Plugged and abandoned approximately May 15, 1975.

WELL CHRONOLOGY

H. W. ADDINGTON & ASSOC.
FEEMSTER 3352-15-5

SW/NW Sec. 15-33S-52W
Las Animas County, Colo.

Elevation: 5338' K.B.

1975

Feb. 1 — Spudded at 1:45 P.M. Drilled 13 3/4" surface hole to 236' at 11:00 P.M.

Feb. 2 — Reamed surface hole to 14 3/4" before running casing. Ran 10 3/4" surface casing and set at 226' K.B. measurement. Cemented casing with 200 sacks of common cement plus 2% calcium chloride. Plug down at 5:30 P.M.

Feb. 3 — Started drilling cement at 9:30 A.M. Drilled out cement to 236'. Shut down well for rig repairs. Back to drilling from 236' at 6:55 P.M.

Feb. 4 — Drilling 9 7/8" hole @ 529' at 8:00 A.M.

Feb. 5 — Drilling @ 1288' at 8:00 A.M. Trip for new bit @ 1491 at 6:30 P.M.

Feb. 6 — Drilling @ 1523' at 8:00 A.M. Too much fluid to move with air below 1700'. At 1731' decision was made to switch to mud.

Feb. 7 — 1731' at 8:00 A.M. Mixing mud.

Feb. 8 — Reaming with 7 7/8" bit. 3 stands and single off 1731' TD at 8:00 A.M. Lost circulation, 1 stand and single off bottom. Stuck drill pipe and twisted off.

Feb. 9 — Preparing to fish at 8:00 A.M.

Feb. 10 — Backed off at 1305'. 15 drill collars and bit to wash over. Went in, screwed back into fish with jars and bumper sub and were able to jar loose. Came out but left 4 drill collars and bit in hole. Collars and pipe severly bent. Decision was made to run cement plug and sidetrack the hole.

Feb. 11 — Got plug set at 8:50 A.M. but plug would not hold. Upper hole was caving. Preparing to reset plug.

Feb. 12 — Ran another cement plug. Let set 8 hours. Drilled out and cleaned out to bottom. No returns.

Feb. 13 — Preparing to set plug in bottom and recement upper hole. Cleaned out to 1573'. Ran 50 sack cement plug from 1573-1453'. Did not hold. Ran 100 sack plug from 1573'-1400'.

Feb. 14 — Drilled out upper plug. Had no fill-up on bottom. Drilled ahead and lost circulation at 1600'.

Feb. 15 — Decision made to run 7" casing. Geologist went on standby (at his own suggestion) and returned to Denver until drilling could be resumed.

Feb. 16 thru Feb. 26	Geologist on standby. Received no reports on proceedings during this period.
Feb. 27 thru Mar. 2	Geologist off well due to previous commitment.
Mar. 3 thru Mar. 5	Geologist on standby until informed my services were no longer needed on this test. From Mar. 5 until completion I have received no further chronological data.

Note: From the time I first went on standy Mr. John Stoddard was in charge of the well.

GEOLOGICAL REPORT

H. W. ADDINGTON & ASSOC.
FEEMSTER 3352-15-5

SW/NW Sec. 15-33S-52W
Las Animas County, Colo.

Elevation: 5338' K.B.

The Feemster 3352-15-5 was spudded at 1:45 P.M., February 1, 1975. 13 3/4" surface hole was drilled to 236'. It was then necessary to ream the surface hole to 14 3/4" in order to run the surface casing. 10 3/4" surface casing was run and set at 226' K.B. measurement. Casing was cemented with 200 sacks of common cement plus 2% calcium chloride. Plug was pumped down at 5:30 P.M. on February 2, 1975.

The well went out from under surface at 10:45 A.M., February 3, 1975.

The following formation tops, corrected to Schlumberger Electric Logs, were picked on the well and, subsequently, after the well was completed I ran the remainder of the samples.

Cretaceous System:			
Dakota	-		Well spudded in Dakota.
Jurassic System:			
Morrison	- 213	(+5114)	Behind surface pipe.
Wanakah	- 448	(+4879)	
Triassic System			No samples.
Santa Rosa	- 645	(+4682)	
Permian System	- 964	(+4363)	
Day Creek	- 1060	(+4267)	
Blaine	- 1270	(+4057)	
Glorietta	- 1351	(+3976)	
Yeso	- 1622	(+3705)	
Pennsylvanian System:			
Madera	-		No samples.
Lower Madera Arkose	- 1993	(+3334)	
Morrow	- 2110	(+3220)	
Mississippian System:			
St. Louis	- 2231	(+3107)	
Spergen	- 2324	(+3014)	
Total Depth	- 2400		Driller and Schlumberger.

Note: Tops through 2016' are from ground level elevation.
Tops below 2016' are from K.B. elevation.

The Feemster 3352-15-5 was the seventh in the continuing series drilled by H. W. Addington & Assoc. for the Weyerhaeuser Company and others.

The well ran roughly 150' to 200' higher structurally on all the significant upper markers. However, while drilling below 1700' fluid in the hole increased to the point where it was impossible to lift it with the air available. Rather than run 7" casing at that point, which was the original plan, decision was made to switch to mud.

Pipe was pulled up and the system was converted from the air-mist to mud. After converting to mud, hole was reduced to 7 7/8" but it became necessary to ream three stands and a single off bottom. At one stand and a single off bottom complete lost circulation was encountered and, during the ensuing trip out of the hole, drill pipe became stuck and twisted off.

This resulted in a lengthy fishing job which wound up leaving four drill dollars and a bit in the hole. In retrieving the balance of the fish it was obvious from the severely bent collars and drill pipe that they had been dropped. Decision was made to run cement plug, then set whipstock and bypass the fish.

Due to sloughing it was decided to cement off the upper hole. The first attempt was unsuccessful. The second attempt succeeded, but while cleaning out to lower plug complete returns were lost at 1600'. The third attempt to set the plug was successful; however, it did not hold back the sloughing, so decision was made to run the 7" casing.

At this point I suggested that I go on standby until such time as I might be further needed. My suggestion was accepted and I returned to Denver.

I was on standby from February 15 to February 27, 1975, at which time I took myself off the well for several days because of a prior committment which had been cleared with Mr. Addington in December. I went back on standy March 3, 1975. On March 5, 1975 I was informed by Mr. John Stoddard that my services were no longer needed on this test and I was officially through with the well.

From the time I first went on standby I was not informed regarding any of the proceedings on the well. This data will have to be supplied by Mr. Stoddard who took over complete supervision.

I do know that 7" casing was run but only to 1400'. It was never possible to regain circulation in the whipstocked hole, and the hole was drilled to 1859' without returns. At this point, the well was shut down and rotary rig was moved to another location.

Later a cable tool rig was moved in and the hole deepened from 1859' to 2020' at which point the cable tools could make no further progress because of too much fluid in the hole. The well was again shut down and cable tools moved out.

Finally, after completion of the Eskew 3250-10-2, the rotary rig was moved back over the hole. The hole was cleaned out and 5 1/2" casing was run to 2016' and cemented. 4 3/4" hole was drilled from 2017' to 2400' TD. The hole was plugged and abandoned approximately May 15, 1975.

After the well was finished, I was asked to run the remainder of the samples, which I have done.

Of particular interest was the presence of the Morrow carbonate section so far up on the flank of the Sierra Grande Arch. This certainly makes necessary a reinterpretation of the time of movement of the Freezeout Fault Complex.

The PrePennsylvanian carbonates were, again, Mississippian in age, and their structural position (+3107) is by far the highest of any of the wells on the east flank of the Uplift.

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DETAILED SAMPLE LOG

H. W. ADDINGTON & ASSOC.
FEEMSTER 3352-15-5

SW/NW Sec. 15-33S-52W
Las Animas County, Colo.

Elevation: 5338' K.B.

Sample study starts at 293' in Morrison. Drilling with air and mist.

293-304 Limestone, dark purple, purple-gray, very finely crystalline, dense, very argillaceous and some sandy.

304-306 Shale, green, purple, hard, talcy, clay.

306-329 Sandstone, gray-white, fine, angular to slightly subrounded, very tight, in part quartzitic; with abundant intergranular, siliceous clay; with some interbedded Shale, as above 314-16.

329-334 Shale, purple, pale green, hard, talcy, clay.

334-360 Sandstone, as above; with interbedded Shale, as above 342-47.

360-370 Shale, purple, maroon, green, hard, clay.

370-394 Sandstone, gray-white, very fine to slightly medium, angular to subangular, very tight; with considerable loose, orange grains; much white and gray intergranular, siliceous clay.

394-398 Shale, purple, maroon, green, hard, clay.

398-418 Sandstone, gray-white, orange, very fine to fine and little medium, angular to subangular, most loose grains.

418-420 Shale, as above.

420-440 Sandstone, as above.

440-448 Sandstone, gray-white, fine to medium and some coarse, angular to subangular; with orange and red, opaque and semiopaque Chert; loose to very tightly cemented at base.

448 Top - WANAKAH (+4879)

448-460 Shale, brown, hard, silty to very, very finely sandy; some micromicaceous.

460-580 No samples. Repairing sample trap.

? Top - TRIASSIC (No sample)

580-582 Siltstone to very, very fine Sandstone, brown-red, light brown-red, very tight, slightly limey.

582-589	Shale, brown-red, hard.
589-621	Siltstone to very, very fine Sandstone, brown-red-gray, buff, dark brown-red, micromicaceous, tight, limey.
621-625	Shale, dark brown-red, hard.
625-639	Siltstone to very, very fine Sandstone, brown-red, brown-red-gray, buff, micromicaceous, tight, limey.
639-645	Shale, as above.
645	Top - SANTA ROSA (+4682)
645-668	Sandstone, gray-white, orange-brown, very fine to fine, angular to slightly subangular; all loose.
668-670	Shale, brown-red, dark brown-red, hard.
670-690	Sandstone, gray-white, with abundant varicolored grains, very fine to fine, angular to subangular; with scattered medium, subrounded grains; all loose.
690-696	Shale, as above.
696-736	Sandstone, as above; some medium, angular to subrounded grains; trace very tightly cemented; most loose.
736-764	Sandstone, as above; with much interbedded hard, gray, in part sandy clay.
764-788	Sandstone, gray-white, with some varicolored grains, very fine to fine and some medium, angular to subangular and some subrounded; considerable scattered yellow and red, opaque Chert grains; trace varicolored conglomeratic quartz grains; most loose; trace very tightly cemented.
788-792	Shale, varicolored, hard, mottled.
792-810	Sandstone, as above.
810-850	Samples all Shale, but log does not so indicate.
850-964	Samples are so poor it is impossible to interpret them, also most are from up hole erosion by the air drilling and are not in place.
964	Top - PERMIAN (+4363)
964-1013	Siltstone to Sandstone, orange-red, dark orange-red, very very fine to very fine, angular, micromicaceous, very tight, very slightly limey; some shaly.
1013-1018	Shale, dark brown-red, chocolate, hard.
1018-1026	Siltstone, orange-red, dark orange, very very fine to very fine, angular, micromicaceous; some shaly.
1026-1040	Shale, dark red, chocolate, very hard, some micromicaceous.

1040-1050 Siltstone to Sandstone, as above.

1050-1054 Shale, as above; some dark orange-brown.

1054-1058 Siltstone to very, very fine Sandstone, dark orange-red, orange-red, micromicaceous, very tight; some shaly.

1058-1060 Shale, as above.

1060 Top - DAY CREEK (+4267)

1060-1082 Dolomite, pale purple, pink-red, purple, buff, white, very finely crystalline to slightly crystalline, dense to trace minute vugs, little silty.

1082-1100 Shale, dark orange-brown, brown-red, hard, micromicaceous; some quite silty to Siltstone.

1100-1110 Shale, orange-brown, brown-red, hard.

1110-1146 Siltstone to very, very fine Sandstone, dark orange-red, orange-red, micromicaceous, very tight; some shaly.

1146-1149 Shale, dark brown-red, chocolate, dark red, micromicaceous, very hard.

1149-1159 Siltstone to Sandstone, as above.

1159-1164 Shale, as above.

1164-1183 Siltstone to Sandstone, orange, orange-red, dark orange, very very fine to very fine, micromicaceous, tight; with some white, intergranular gypsum.

1183-1187 Shale, dark brown-red, chocolate, dark red, hard.

1187-1209 Siltstone to Sandstone, as above.

1209-1253 Shale, as above; with some interbedded Siltstone to very, very fine Sandstone, as above.

1253-1270 Siltstone to very fine Sandstone, orange, dark orange-red, micromicaceous, tight; some shaly.

1270 Top - BLAINE (+4057)

1270-1290 Anhydrite, white, massive, dense; traces white, soft gypsum.

1290-1293 Shale, red, dark red, chocolate, hard.

1293-1320 Anhydrite, white, pink, red, finely crystalline to massive dense; traces of white, soft gypsum; with little interbedded Dolomite, gray, very finely crystalline, dense, 1309-20.

1320-1351 Shale, red, dark red, chocolate.

1351 Top - GLORIETTA (+3976)

1351-1389	Sandstone, gray-white, trace pink, very fine to medium and few coarse grains, angular to subangular and few subrounded grains; very tight to all loose grains; some pyrite and little pyritic sand; considerable intergranular silica toward bottom.
1389-1406	Shale, red, dark red, chocolate.
1406-1438	Sandstone, gray-white, very fine to medium and few coarse grains, angular to subrounded and some rounded, tight to very friable; some pyrite; with some interbedded Shale, as above.
1438-1446	Shale, as above.
1446-1465	Sandstone, as above; abundant pyrite; much less Shale than above.
1465-1469	Shale, red, dark red, chocolate, hard.
1469-1480	Sandstone, as above; most very fine to fine and most loose; with more interbedded Shale, as above.
1480-1517	Sandstone, gray-white, pale orange, orange-buff, fine to coarse, angular to subangular and little subrounded, poorly sorted; most very tightly cemented; few loose grains.
1517-1552	Sandstone, pale orange, orange-buff, gray-white, fine to coarse, angular to subangular and little subrounded, poorly sorted; most very lightly cemented; trace pyrite.
1552-1573	Sandstone, pale orange, orange-buff, very fine to medium, angular to subangular, very tight, slightly limey.
1573-1584	Shale, red, chocolate, brown-red, hard.
1584-1617	Sandstone, pale orange, orange-buff, very fine to medium, angular to subangular and trace subrounded, very tightly cemented; some included black specks; slightly limey; trace pyrite.
1617-1622	Shale, as above.
1622	Top - YESO (+3705)
1622-1638	Siltstone to very, very fine Sandstone, dark orange-red, micromicaceous, shaly; slightly limey.
1638-1639	Shale, dark chocolate, hard, micromicaceous.
1639-1650	Siltstone to very, very fine Sandstone, as above.
1650-1656	Shale, as above; with little interbedded Siltstone to Sandstone.
1656-1671	Siltstone to very, very fine Sandstone, dark orange-red, orange-brown, micromicaceous; with some interbedded Shale, dark chocolate, chocolate-red, hard, micromicaceous.
1671-1674	Shale, dark chocolate, chocolate-red, hard, micromicaceous.

1674-1700 Siltstone to very, very fine Sandstone, dark orange-red, brown-red, micromicaceous, some shaly; with interbedded Shale, chocolate, dark red, red, hard 1684-86 and 1693-95.

Note: Samples from below surface casing were extremely poor due to large (9 7/8") hole and severe stringing of samples as a result of the rapid penetration rates.

1700-1859 NO SAMPLES (LOST CIRCULATION).

Note: Drilled with cable tools from 1859' to 2020'.

1859-1862 Shale, dark red and red, hard; traces of arkose.

1862-1866 Dolomite, red, pink-red, very finely crystalline, dense, very finely sandy in part.

1866-1867 Shale, as above.

1867-1870 Sandstone, gray, pink-gray and pink, fine to medium, angular to sub-angular and slightly subrounded; with abundant intergranular, white, siliceous clay; some very fine to fine at base.

1870-1872 Shale, dark red, red, purple-red, hard.

1872-1876 Sandstone, gray-white, white, little red, very fine, angular, slightly micromicaceous, tight dolomitic; with considerable loose, coarse, slightly weathered arkose and quartz grains.

1876-1878 Shale, dark red, red, hard.

1878-1884 Sandstone, red, orange-red, purple-red, pink-red, gray-white, very fine, angular, micromicaceous, tight, very slightly dolomitic; with some medium to coarse, quartz and arkose grains.

1884-1890 Shale, dark red, purple-red, hard; with interbedded Siltstone, red, purple-red, micromicaceous, very tight.

1890-1899 Siltstone to very fine Sandstone, red, dark red, orange-red, gray-white, micromicaceous, very tight, very slightly dolomitic.

1899-1901 Shale, purple-red, hard, slightly micromicaceous.

1901-1909 Siltstone to very fine Sandstone, red, purple-red, gray-white, slightly to quite dolomitic, micromicaceous, very tight; few loose quartz, arkose and granite wash grains.

Note: No electric logs from 1911' to 2012'.

1909-1921 Shale, dark red, red, chocolate, purple, micromicaceous, hard, some silty; trace Dolomite, orange-brown, very very finely crystalline, very dense; trace white, soft gypsum; trace loose quartz and arkose grains.

1921-1924 Siltstone to very fine Sandstone, orange-red, gray-white, micromicaceous, very tight to slightly friable, very slightly dolomitic.

1924-1933 Shale, purple-red, light chocolate, some micromicaceous, hard; with interbedded Siltstone to Sandstone, gray-white, orange-red, purple-red, very very fine to fine, angular, micromicaceous, tight to friable, slightly to quite dolomitic; trace weathered arkose and quartz grains.

1933-1935 Sandstone, red, fine to medium, angular to subangular, friable, dirty.

1935-1942 Shale, dark red, chocolate, purple-red, hard, some micromicaceous, some silty to Siltstone; trace coarse to very coarse, subrounded, weathered quartz grains.

1942-1950 Siltstone to very, very fine Sandstone, dark orange-red, micromicaceous, shaly; with interbedded Shale, dark chocolate, dark red, hard; some dark red dolomite nodules and scattered, weathered quartz grains.

1950-1962 Siltstone to very, very fine Sandstone, dark red, dark orange-red, dark purple-red, micromicaceous, very tight, shaly.

1962-1964 Shale, dark chocolate, dark purple-red, hard; trace granite wash grains.

1964-1968 Siltstone to Sandstone, dark orange-red, dark red, trace purple-red, very very fine to very fine, micromicaceous, tight.

1968-1973 Shale, chocolate, dark purple-red, hard; trace dark red, dense, dolomite nodules; and trace loose, weathered quartz grains.

1973-1976 Siltstone to Sandstone, as above; traces of white, soft gypsum.

1976-1979 Shale, as above.

1979-1981 Sandstone, purple, purple-red, red, very fine to slightly medium, angular, micromicaceous, friable, dirty; with trace loose arkose and quartz grains.

1981-1984 Shale, dark chocolate, purple-red, hard, some silty; trace weathered quartz grains.

1984-1993 Siltstone to very, very fine Sandstone, dark orange-red, gray-white, micromicaceous, tight; with interbedded Shale, as above.

1993 Top - LOWER MADERA ARKOSE (+3334)

1993-2006 Arkose, Quartz Wash, Granite Wash, gray-white, pink, red, coarse to very coarse, subangular, some weathered, most loose grains; with interbedded Shale, chocolate, purple-red, hard, some silty.

2006-2015 Shale, as above; with little interbedded Siltstone, orange-red, purple-red, micromicaceous; and scattered quartz and arkose grains, most slightly weathered.

Note: All tops to 2016' are from ground level elevation. Tops from 2016' to 2400' are from K.B. elevation.

2015-2018 Shale, purple-red, hard, some silty.

Cable tool TD - 2020', corrected when casing was run to 2017'.

Note: Drilled below 5 1/2" casing with 4 3/4" bits. 20' samples to 2130'.

2018-2042 Siltstone to very, very fine Sandstone, pale purple-red, light red, micromicaceous, very tight, shaly.

2042-2074 Sandstone, gray-white, varicolored, fine to very coarse, angular to slightly subrounded, very tightly cemented; arkosic to considerable quartz wash and trace granite wash; more loose, very coarse and very, very coarse grains toward bottom.

2074-2086 Siltstone to very fine Sandstone, light red, purple-red, micromicaceous, very tight, some shaly.

2086-2088 Shale, dark red, chocolate, hard.

2088-2091 Siltstone to Sandstone, as above.

2091-2103 Sandstone, gray-white, pink, pink-red, red, dark red, medium to very, very coarse, angular to slightly subrounded, very tightly cemented to loose grains, arkosic and quartz wash and little granite wash, most slightly weathered.

2103-2110 Siltstone to Sandstone, as above.

2110 Top - MORROW (+3220)

2110-2112 Shale, purple, green, talcy to slightly waxy, hard; some with interbedded sand grains.

2112-2120 Dolomite, gray-white, red-buff, pale purple, very finely crystalline to finely crystalline, dense.

2120-2126 Shale, purple, purple-red, pale green, green, talcy to waxy, fairly hard, little sandy.

2126-2137 Dolomite, buff and varicolored, finely crystalline to very slightly crystalline, very tight; with interbedded Shale, as above.

2137-2146 Sandstone, green, purple-green, varicolored, fine, angular to slightly subangular, very tightly cemented, dirty; and some interbedded Shale, purple, purple-red, red-green, waxy to talcy, hard.

2146-2170 Dolomite, varicolored, very finely crystalline to slightly crystalline, very tight; with little interbedded Shale, pale purple, purple-red, green, waxy to talcy.

2170-2184 Dolomite, as above; with little interbedded Sandstone, purple-gray-green and trace white, very fine to fine and slightly medium, angular, very tight, very dirty (looks metamorphic derived); and Shale, as above.

2184-2188 Shale, purple, purple-red, talcy.

2188-2198 Dolomite, purple and varicolored, finely crystalline to crystalline, very tight; with considerable Chert, gray-white, pink-red-gray, some varicolored, opaque, abundantly microfossiliferous; more finely crystalline at base.

2198-2209 Dolomite, pale purple, purple-gray and little varicolored, very finely crystalline to finely crystalline and little slightly crystalline, dense, slightly glauconitic; with interbedded Shale, purple, purple-red, green, waxy to talcy.

2209-2215 Dolomite, pale purple, purple-gray, very finely crystalline, dense, shaly, glauconitic; and some interbedded Shale, as above.

2215-2225 Dolomite, purple, pale purple, purple-gray, buff, very very finely crystalline to finely crystalline, dense, some glauconitic; some buff and red-buff, finely crystalline to crystalline, dense; with medium to coarse, subangular to subrounded, sand grains imbedded.

2225-2231 Shale, pale purple, purple-gray, red, talcy to waxy.

2231 Top - MISSISSIPPIAN (ST. LOUIS) (+3107)

2231-2251 Dolomite, pale purple, purple-gray, some varicolored, very finely crystalline to finely crystalline, dense; trace Chert, white, gray-white, opaque, and gray, gray-tan, semiopaque.

2251-2281 Dolomite, pale purple, purple-red, red-buff, purple-buff, pink-buff, finely crystalline to trace crystalline, dense; considerable Chert, gray-white, buff-white, opaque and slightly semiopaque, little chert is varicolored.

2281-2324 Dolomite, purple-red, red-buff, purple-buff, little buff, most mottled, slightly crystalline to crystalline, tight to slightly crystalline vug porosity; little to some Chert, gray-white, opaque, trace with red inclusions; some scattered imbedded sand grains 2210-24.

2324 Top - SPERGEN (+3014)

2324-2332 Dolomite, buff, light brown, pink, pink-red, red-buff, very finely crystalline to finely crystalline, very tight to trace intercrystalline porosity.

2332-2349 Dolomite, pink-buff, pale purple-buff, buff, light brown, very finely crystalline to crystalline, very tight.

2349-2364 Dolomite, buff, light brown, some varicolored, very finely crystalline to crystalline, very tight.

2364-2374 Dolomite, buff, pink-buff, light brown, little brown and gray, very finely crystalline to finely crystalling, considerable quite granular.

2374-2392 Dolomite, buff, light brown, gray, some varicolored, finely crystalline to slightly crystalline, very tight; trace white, opaque Chert.

2392-2400 Dolomite, buff, light green, light brown, some varicolored, very finely crystalline to finely crystalline, very tight to trace micro vug porosity; trace very finely sandy.

2400 Total depth - Driller & Schlumberger.

Samples described:

JOSEPH R. CLAIR
(on well)

DRILLING TIME LOG

H. W. ADDINGTON & ASSOC.
FEEMSTER 3352-15-5

SW/NW Sec. 15-33S-52W
Las Animas County, Colo.

Elevation: 5338' K.B.

Five foot drilling time from 235'.

235- 300	5-7-4	4-6-5-6-8-8-5-5-10-6	
300- 400	5-10-23-14-14-45-13-5-23-4	25-20-13-12-21-4-3-2-12-10	
400- 500	8-7-4-12-4-4-6-4-5-4	4-4-7-6-3-4-6-8-11-7	
500- 600	5-9-4-4-2-6-10-5-5-5	7-10-3-7-5-3-4-3-5-8	
600- 700	5-5-6-7-4-5-7-7-7-12	17-3-7-6-4-8-3-3-2-3	
700- 800	2-2-5-6-7-5-4-4-4-8	4-2-2-2-2-2-2-5-5-6	
800- 900	6-7-4-4-5-5-5-4-4-4	3-2-2-6-4-3-3-3-8-6	Trip @ 806'.
900-1000	10-5-3-4-4-5-4-7-4-5	7-8-5-10-9-6-6-7-5-5	Bit #4.
1000-1100	2-4-4-3-5-6-5-8-9-8	8-9-13-9-5-9-9-9-11-11	
1100-1200	9-4-4-3-5-8-9-7-7-7	3-7-3-9-7-4-9-8-2-10	
1200-1300	4-2-3-7-3-5-7-5-6-5	5-5-5-5-10-5-5-10-8-12	
1300-1400	9-11-9-6-10-11-14-11-3-5	5-6-8-5-3-5-4-3-4-4	
1400-1500	2-2-8-5-5-7-7-9-7-6	9-6-10-7-8-8-16-12-6-8	Trip @ 1491'.
1500-1600	9-5-11-9-8-5-7-5-5-5	5-8-7-6-6-6-8-6-7-7	Bit #5.
1600-1700	9-9-8-7-10-5-7-8-11-7	6-7-12-14-13-21-17-13-11-13	

No further drilling time was ever supplied to me. Test drilled blind from 1700-1859'. Drilled with cable tools from 1859-2020'. Drilled 4 3/4" hole with rotary from 2020'-2400'.

BIT RECORD

H. W. ADDINGTON & ASSOC.
FEEMSTER 3352-15-5

SW/NW Sec. 15-33S-52W
Las Animas County, Colo.

Elevation: 5338' K.B.

Run No.	Size	Make	Type	Jet Size 1	2	3	Serial	Depth out	Feet	Hours
1	13 3/4						Retip	236	236	9 1/2
2	14 3/4						Rerun	236	*	
3	9 7/8	Sec.	M4N		none		547804	806	570	14 1/2
4	9 7/8	HTC	OSC		none		DZ115	1491	686	17 1/2
5	9 7/8	HTC	J33		open		PM022	1731	240	6 3/4
6	7 7/8	Sec.	M4NG	14/32	14/32	14/32	549772	Dropped		
7	7 7/8	Sec.	M4NJ	9/16	9/16	9/16	554241	Wore out reaming.		
8	7 7/8	Sec.	M4NJ	9/16	9/16	9/16	553777	Wore out reaming.		
9	7 7/8	Sec.	M4NJ	15/32	15/32	15/32	555143	Milled on iron.		
10	6 1/8	HTC	W-7		none		Rerun	1628	41 **	
11	6 1/8	HTC	OWVJ				EX160	1870	244	8 3/4

* Reamed.
** Reamed whipstocked hole.