

WELL HISTORY REPORT


CHEVRON SOBC GULF RIDGE

YT F-48

Well History Report

Chevron SOBC Gulf Ridge YT F-48

April 18, 1973



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Project Manager

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SECTION I

Summary of Well Data

(a) Well Name and Number

Chevron SOBC Gulf Ridge YT F-48

(b) Permittee, Licensee or Lessee

Gulf Oil Canada Limited

(c) Name of Operator

Chevron Standard Limited
400 Fifth Avenue S.W.
Calgary, Alberta
T2P 0L7

(d) Location

Unit F, Section 48, Grid 67° 20' N, 137° 45' W

(e) Coordinates

Latitude 67° 17' 23" N, Longitude 137° 53' 35" W

(f) Permit or Lease Number

Permit No. 6462

(g) Drilling Contractor

Nabors Drilling Limited, Rotary Rig #1 (Oilwell 76)

(h) Drilling Authority

Drilling Authority No. 628 issued November 6, 1972

(i) Classification

Wildcat

(j) Elevations

GD. Elev: 1034' Fill: 5.0' KB GL: 14.60' KB Elevation: 1054'

(k) Spudded

Spudded in at 1900 hrs. January 3, 1973

(l) Completed Drilling

Completed Main Hole at 1900 hrs. March 28, 1973

(m) T.D. and P.B.T.D.

T.D. - 6131 ft.; P.B.T.D. - Surface

(n) Well Status

Dry and permanently abandoned

(o) Rig Release Date

Rig released at 2400 hrs. April 2, 1973

(p) Hole Sizes to Total Depth

36" hole from surface to 44 ft. G.L.

30" hole from 44 ft. to 47 ft. GL

17½" hole from 66 ft. KB to 886 ft. KB

8-¾" hole from 886 ft. KB to 6131 ft. KB

(q) Casing

19" OC conductor pipe set at 66.30' KB

13-¾" K-55, 54.5# casing set at 881.81' KB

(r) Engineers

L. F. Grumbly, R. K. Cannon, G. G. Moench

Geologists

O. Gietz, P. Collier

SECTION II

Geological Summary

(a) Formation Tops

<u>Formation</u>	<u>Depth</u>	<u>Elevation</u>
		K.B. 1054'
Spuds in Lower/Middle Albian Shale	-	-
Barremian Siltstone Unit	2870'	-1816'
Hauterivian Siltstone/Sandstone Unit	3920'	-2866'
Johnson Creek (Upper Jurassic)	4625'	-3571'
Husky Member	4735'?	-3681'
Bug Creek Member	4892'?	-3838'
Jl Shale Member	5247'	-4193'
Upper Devonian Imperial Formation	5370'?	-4316'

Missing Samples
880-1010

4800-4710
= K/S 64y

5140-
5810
JE/Dev.

Total Depth 6131'

(b) Cored Intervals

<u>Core No.</u>	<u>Interval</u>	<u>Formation</u>	<u>Recovery</u>
1	4647-4674	Johnson Creek	26.5'
2	4679-4699	Johnson Creek	20.0'

(c) Core Description

Core #1 4647'-4674' cut 27' Rec. 26.5'

Coring Times

4647'	-	4	5	5	6	6	6	8	6	8	8
		8	8	6	9	7	7	7	8	8	7
		7	8	8	9	8	23	25	Jammed - 4674'		

4647'-4674' (Description Core #1)

Core #1

Sandstone - white to light grey, mainly fine-grained, grading to very fine; quartzose (95% quartz), glauconitic (3%). Massive: no bedding, except for lamination in basal 6". Occasional solution surfaces lined with pyrobitumen.

Hard, silica cemented, locally quartzitic. Well sorted; grains subrounded to well rounded. Poor intergranular porosity throughout; (5% - 10%). Poor to zero permeability. Trace of spotty oil bleeding from pin-point vugs. Numerous vertical fractures throughout, lined with calcite crystals.

Horizontal worm tracks common; occasional small pelecypods (Buchia sp.) seen on solution surfaces.

Core #2 4679'-4699' Cut 20' Rec. 20'

Coring Times

4679'	-	21	13	14	12	9	10	11	11	13	12	
		11	12	12	13	15	15	14	17	16	45	Jammed - 4699'

4679'-4699' (Description Core #2)

Core #2

Sandstone - white to light grey, very fine-grained, grading to fine-grained; quartzose (95% quartz), glauconitic (3%). Massive: no bedding throughout. Occasional solution surfaces lined with pyrobitumen. Minor pyrite.

Very hard to quartzitic throughout (30% silica cement); well sorted, grains subrounded to well rounded. Trace of intergranular porosity throughout - not effective. Patchy oil stains in rock matrix; does not fluoresce: trace of gas bleeding from matrix and minor subvertical fractures.

Occasional clusters of pelecypods (*Buchia* sp.); rare horizontal worm tracks.

(d) Sample Description

- 150-230 Shale, grey, silty, blocky, noncalcareous. Few sandy streaks. Trace of chert pebbles, few floating chert grains. Trace of pyrite.
- 230-250 Shale, grey, silty and sandy, noncalcareous. Trace of pyrite. Trace of chert fragments.
- 250-260 Shale, as above. Trace of brown sandy shale, ironstone. Trace of chert pebbles, pyrite.
- 260-420 Shale, grey, blocky to sub-fissile, noncalcareous, silty streaks. Minor brown-grey shale. Trace of brown, silty ironstone.
- 420-470 Shale, grey, blocky, noncalcareous. Few grey silty and sandy streaks.
- 470-500 Shale, as above. Trace of sandy streaks. Trace of pyrite, chert pebbles. Trace of calcareous silty streaks.
- 500-540 Shale, grey, blocky, noncalcareous. Trace of sub-fissile to splintery shale.
- 540-560 Shale as above. Trace of rusty brown ironstone.
- 560-600 Shale, grey silty and sandy streaks, noncalcareous. Few slightly calcareous sandy streaks.
- 600-610 N.S.
- 610-670 Shale, grey, blocky, noncalcareous. Few slightly calcareous sandy streaks.
- 670-680 Shale, grey, blocky, silty, noncalcareous. Trace of brown-grey shale.
- 680-710 Shale, grey, blocky, noncalcareous.
- 710-720 N.S.
- 720-780 Shale, grey, blocky to sub-fissile, noncalcareous. Few silty streaks.
- 780-790 Shale, grey, sandy and silty, blocky noncalcareous.
- 790-800 Shale, silty, sandy as above. Trace of brown shale, smooth dark red shale.

- 800-840 Shale, grey, blocky, noncalcareous. Minor silty shale, sandy streaks.
- 840-880 Shale, grey, blocky, silty. Minor grey sandy calcareous streaks.
- 880-910 N.S.
- 910-980 Shale, grey, silty, blocky, noncalcareous. Minor very fine-grained sandy streaks, trace of glauconite. Trace of chert fragments, pyrite. Trace of argillaceous brown limestone.
- 980-1000 Shale, as above. Trace of grey, fine sandy and silty streaks with rare glauconite, faintly calcareous.
- Trace of ironstone. Traces of dark grey-green smooth blocky, noncalcareous shale.
- 1000-1060 Shale, grey, blocky, noncalcareous. Minor silty shale, traces to minor grey, very fine-grained slightly calcareous sandstone. Trace of dark grey-green blocky, noncalcareous shale; traces of ironstone; grey limestone, chert.
- 1060-1090 Shale, as above, grey, blocky, silty, noncalcareous to faintly calcareous. Minor dark brown-grey iron-stained shale. Trace of chert, trace of limestone.
- 1090-1100 Shale, grey, blocky, noncalcareous. Traces of silty shale minor pale brown ironstone.
- 1100-1110 N.S.
- 1110-1120 Shale, grey, blocky noncalcareous. Trace of silty shale. Trace of chert. Abundant pale brown ironstone.
- 1120-1150 Shale, grey, silty, faintly calcareous to noncalcareous. Minor pale brown ironstone. Trace of pyrite.
- 1150-1160 Shale, grey, silty, noncalcareous, blocky. Trace of splintery and blocky dark grey-green shale. Traces of ironstone, chert. Minor fine sandy streaks, silty streaks.
- 1160-1170 Sandstone, grey, argillaceous, very fine to fine-grained, noncalcareous, grading to very sandy shale, rare glauconite. Trace of white bentonite.
- 1170-1190 Shale, grey, silty, noncalcareous. Minor sandy shale. Trace of dark brown-grey argillaceous limestone, traces of chert pebbles.

- 1190-1210 Shale, grey, silty, noncalcareous. Minor grey, fine-grained sandy streaks, shaly sandstone. Minor pale grey and white bentonite. Trace of brown, argillaceous limestone. Trace of chert.
- 1210-1230 Shale, grey and dark grey, silty, noncalcareous. Trace of bentonite.
- 1230-1250 Shale, grey, silty, noncalcareous. Trace of bentonite, ironstone, chert, calcite fragments.
- 1250-1260 Shale, dark grey and grey, silty, noncalcareous. Traces of calcite fragments, trace of bentonite, chert.
- 1260-1290 Shale, grey, silty, noncalcareous. Trace of fossil fragments. Trace of bentonite, calcite fragments, ironstone. Few streaks of grey fine-grained calcareous sandstone.
- 1290-1320 Shale, grey, silty textured, noncalcareous. Traces of bentonite, pyritised plant remains, trace of chert, calcite fragments. Trace of sandy streaks, sparse glauconite, calcareous in part.
- 1320-1330 N.S. Shaker bypassed.
- 1330-1340 Shale, grey, silty, noncalcareous. Much pale grey bentonite. Calcite, limestone fragments. Trace of calcareous sandy streaks.
- 1340-1350 Shale, grey, silty, noncalcareous. Much pale grey bentonite. Traces of ironstone, limestone and calcite fragments. Trace of fossil fragments (Inoceramus?). Trace of bitumen.
- 1350-1380 Shale, grey, silty, noncalcareous. Trace of black chert pebbles, trace of bentonite. Trace of dark brown dense limestone. Trace of grey, calcareous sandy streaks.
- 1380-1420 Shale, as above. Trace of finely laminated silty streaks. Increase in bentonite, calcite fragments. Trace of chert. Trace of calcareous fine sandy streaks.
- 1420-1430 Shale, grey, silty, noncalcareous. Trace of sandy streaks, slightly calcareous. Minor bentonite, calcite fragments. Trace of rusty ironstone.
- 1430-1450 Shale, grey, silty, noncalcareous. Trace of calcareous sandy streaks with rare glauconite. Minor bentonite, trace of chert.
- 1450-1460 Shale, grey and dark grey noncalcareous, micromicaceous, silty in part. Trace of bentonite, calcite fragments.

- 1460-1470 Shale, grey, noncalcareous, silty in part. Traces of silty calcareous shale, trace of brown argillaceous limestone. Minor bentonite, calcite fragments.
- 1470-1490 Siltstone, grey, very argillaceous, grading to silty shale, noncalcareous. Rare glauconite.
- 1490-1500 Siltstone, grey, argillaceous, as above. Shale, grey and dark grey, noncalcareous.
- 1500-1510 Shale, grey, silty and noncalcareous. Much grey, blocky calcareous shale.
- 1510-1520 Shale as above. Trace Inoceramus?
- 1520-1530 Shale, grey, noncalcareous, silty in part. Trace of bentonite, calcite fragments.
- 1530-1540 Shale, as above, silty, grading in part to argillaceous siltstone, micromicaceous. Siltstone, grey calcareous.
- 1540-1580 Siltstone, grey, slightly calcareous to calcareous, finely glauconitic. Minor shale, grey, silty in part, noncalcareous. Trace of grey and black chert.
- 1580-1620 Shale, grey micromicaceous, silty in part, blocky, noncalcareous.
- 1620-1630 Shale, as above. Trace grey, calcareous siltstone.
- 1630-1640 Shale, dark grey, blocky, silty, micromicaceous, noncalcareous.
- 1640-1650 Siltstone, grey argillaceous, calcareous.
- 1650-1670 Shale, dark grey, silty, micromicaceous noncalcareous. Minor grey silt streaks, noncalcareous.
- 1670-1690 Shale, silty, grey, noncalcareous to trace calcareous. Trace calcite fragments, silty streaks.
- 1690-1710 Shale, dark grey, silty, micromicaceous, noncalcareous. Interbedded grey silty, noncalcareous to partly calcareous shale.
- 1710-1720 Shale, grey, silty, noncalcareous. Minor grey, calcareous silty streaks.
- 1720-1730 Shale, dark grey, micromicaceous, silty, sub-fissile to blocky. Trace of calcareous silt streaks.
- 1730-1750 Shale, grey, dark medium grey, silty in part, noncalcareous. Traces of glauconite. Trace of gastropods.

- 1750-1760 Siltstone, grey, argillaceous, noncalcareous to faintly calcareous, trace glauconitic.
- 1760-1770 N.S.
- 1770-1790 Siltstone, grey, argillaceous, slightly calcareous. Much medium dark grey very silty shale, trace of glauconite.
- 1790-1800 Siltstone, grey, slightly calcareous, faintly glauconitic, argillaceous.
- 1800-1810 Shale, dark medium grey, blocky to sub-fissile, noncalcareous. Trace of soft, grey bentonite.
- 1810-1820 Siltstone, light medium grey, noncalcareous, argillaceous, faintly glauconitic, grading in part to very fine sandstone.
- 1820-1830 Siltstone, light medium grey, grading in part to very fine sandstone; slightly calcareous to noncalcareous.
- 1830-1840 Shale, grey, silty, blocky, noncalcareous. Trace of light brown resinous limestone. Much grey, argillaceous siltstone.
- 1840-1850 Siltstone, grey argillaceous, calcareous in part, grading to very fine-grained grey sandstone. Much dark medium grey silty shale.
- 1850-1860 Shale, dark medium grey, silty, grading to argillaceous siltstone, noncalcareous. Minor dark grey, sub-fissile, micromicaceous, noncalcareous shale, trace brown silty shale.
- 1860-1870 Shale, dark grey brown and grey, silty, micromicaceous, blocky, noncalcareous.
- 1870-1880 Siltstone, grey, argillaceous, noncalcareous, grading to silty shale. Much dark medium grey silty shale and micromicaceous shale, sub-fissile to blocky.
- 1880-1900 As above, grey argillaceous siltstone, slightly calcareous to calcareous. Trace of resinous limestone.
- 1900-1960 Siltstone, grey, argillaceous, calcareous in part, faintly glauconitic, grading in part to very fine sandstone. Traces of fine lamination. Shale, dark medium grey, silty to smooth, blocky noncalcareous, micromicaceous. Trace of brown, resinous limestone with intercrystalline anhydrite as pockets and worm boring infilling.

- 1960-1970 Shale, dark medium grey, dark grey, micromicaceous, silty in part, noncalcareous. Minor dark grey, sub-bituminous shale. Much grey argillaceous siltstone, as above.
- 1970-1980 Siltstone, grey, argillaceous, calcareous, interbedded dark grey shale, shaly partings and laminae, and black, partly bituminous, micromicaceous.
- 1980-1990 Shale, dark grey, sub-fissile, micromicaceous, noncalcareous, sub-bituminous. Minor grey siltstone, as above.
- 1990-2060 Siltstone, grey, argillaceous, noncalcareous to slightly calcareous, interbedded grey and dark grey noncalcareous silty shale and black, micromicaceous shale. Trace of pyrite. Trace of calcite veining.
- 2060-2070 Shale, dark grey, silty in part, micromicaceous, noncalcareous, partly bituminous. Trace of pyrite. Minor interbedded grey, partly calcareous siltstone.
- 2070-2080 Shale, minor interbedded grey siltstone, as above. Trace of pale brown and brown limestone.
- 2080-2090 Shale, grey, silty, grading in part to very argillaceous siltstone, noncalcareous, micaceous. Trace of calcite-lined fractures.
- 2090-2110 Shale and silty shale, as above. Much dark grey, noncalcareous sub-fissile to silty, micromicaceous shale. Trace of calcite.
- 2110-2120 Shale, dark grey, sub-fissile, noncalcareous, micromicaceous. Trace of glauconite, pyrite. Trace of grey siltstone streaks and laminae.
- 2120-2130 Siltstone, grey, faintly calcareous to noncalcareous; argillaceous, micaceous in part. Much shale, as above.
- 2130-2140 Shale, grey, silty, finely laminated in part with silty streaks, sub-fissile.
- 2140-2160 Shale, grey, dark medium grey, noncalcareous, micromicaceous, sub-fissile to blocky. Traces of silty laminae. Minor grey, noncalcareous siltstone.
- 2160-2180 Shale, dark grey, grey, sub-fissile, noncalcareous micromicaceous. Trace silty streaks.
- 2180-2200 Shale, grey, micromicaceous, silty in part, blocky, noncalcareous.
- 2200-2220 Shale, dark medium grey, dark grey, sub-fissile, micromicaceous, noncalcareous. Few silty laminae.

- 2220-2250 As above. Minor black, micaceous bituminous shale. Few silty streaks. Trace of pyrite.
- 2250-2270 Shale dark medium grey, blocky to sub-fissile, trace calcareous to noncalcareous, micromicaceous.
- 2270-2290 Shale, grey, noncalcareous, blocky to sub-fissile, micromicaceous. Few silty streaks, calcareous in part. Traces of fracturing. Trace of brown limestone.
- 2290-2350 Shale, dark grey, fissile, noncalcareous, micromicaceous. Interbedded grey, silty shale and grey siltstone streaks, calcareous in part. Trace of brown limestone, traces of fracturing.
- 2350-2370 Shale, grey, blocky to sub-fissile, noncalcareous, micromicaceous. Much silty shale, streaks of grey calcareous siltstone. Trace of open fractures.
- 2370-2380 Shale, grey and dark medium grey, micromicaceous, noncalcareous. Few silty streaks. Trace of calcite-lined drusy fractures.
- 2380-2490 Shale, grey, noncalcareous, blocky, silty in part, micromicaceous. Trace of pyrite. Few grey, slightly calcareous silty streaks, finely laminated.
- 2490-2610 Shale, grey and dark grey, micromicaceous, noncalcareous, blocky to sub-fissile. Interlaminated grey, slightly calcareous silty streaks.
- 2610-2620 Shale, dark medium grey, sub-fissile to blocky, noncalcareous, micromicaceous. Interlaminated grey, partly calcareous silty streaks. Trace of brown, argillaceous limestone.
- 2620-2650 Shale, interlaminated silty streaks, as above. Trace of pyrite. Trace of ironstone.
- 2650-2740 Shale, dark medium grey, sub-fissile, micromicaceous, noncalcareous. Much grey, calcareous siltstone and silty laminae.
- 2740-2760 Shale, dark medium grey, sub-fissile to fissile, noncalcareous, micromicaceous.
- 2760-2790 Shale, dark grey, noncalcareous, sub-fissile to fissile; micromicaceous. Much light brown-grey ironstone. Trace to minor grey silt, silty shale. Fractures, slickensides.

- 2790-2800 Shale, dark grey, noncalcareous, sub-fissile to fissile, micromicaceous. Trace of fractures, slickensides. Trace of ironstone.
- 2800-2820 Shale, dark grey, sub-fissile to fissile, noncalcareous, micromicaceous trace of silt laminae, trace of pyrite.
- 2820-2890 Shale, dark grey, sub-fissile to fissile, micromicaceous, slightly anhydritic. Siltstone (20% - 40%), dark grey, shaly, in millimetre laminae.
- 2890-3130 Shale, dark grey, sub-fissile, micromicaceous, slightly silty and anhydritic. Siltstone (30% - 50%), medium grey, shaly in millimetre laminae. Numerous calcite veins infilling microfractures.
- 3130-3190 Siltstone, light to medium grey, sandy in part, iron specks, in centimetre to millimetre interbeds. Shale (30% - 50%) dark grey, micromicaceous, slightly silty and anhydritic.
- 3190-3230 Shale, dark grey, fissile, micromicaceous, slightly silty and anhydritic. Siltstone (30% - 50%) medium grey, shaly, in part, in centimetre to millimetre interbeds.
- 3230-3290 Siltstone, medium grey, shaly, occasionally sandy and sub-quartzose, in centimetre to millimetre interbeds. Shale (30% - 50%) dark grey, silty and micromicaceous, slightly anhydritic. Calcite veins infilling microfractures.
- 3290-3310 Shale, as above (70%). Siltstone, (30%) medium grey, shaly.
- 3310-3330 Siltstone, medium grey, sandy in part, iron specks and siderite nodules; silicified. Shale (30% - 50%) dark grey, silty and micromicaceous.
- 3330-3500 Shale, dark grey, fissile and micromicaceous, slightly silty and anhydritic. Siltstone (10% - 30%) medium to dark grey, shaly, in occasional millimetre to centimetre interbeds. Calcite veins infilling microfractures.
- 3500-3520 Shale, dark grey, sub-fissile to fissile, micromicaceous, slightly anhydritic.
- 3520-³~~7~~600 Shale, dark grey, sub-fissile to fissile, micromicaceous, slightly anhydritic; siderite nodules locally abundant, calcite veins infilling microfractures. Trace of millimetre siltstone laminae.

- 3600-3830 Shale, dark grey, soft, sub-fissile to fissile, micromicaceous, slightly anhydritic; siderite nodules locally abundant; calcite veins infilling microfractures. Trace of millimetre siltstone laminae.
- 3830-3900 Shale, dark grey, silty and micromicaceous; abundant disseminated and nodular pyrite. Siltstone, (20% - 40%), dark grey-brown, shaly, minor glauconite.
- 3900-3910 Siltstone, medium grey-green, very glauconitic, shaly.
- 3910-3920 Shale, dark grey, sub-fissile, micromicaceous, occasional siderite nodules.
- 3920-3960 Siltstone, medium grey to grey-brown, very glauconitic in part, subquartzose in part, shaly. Shale (30%) dark grey, silty and micromicaceous; abundant disseminated and nodular pyrite.
- 3960-3975 Sandstone, very fine-grained S & P, silty, glauconitic and silicified; dark chert grains. Tight.
- 3975-4010 Siltstone, medium grey, subquartzose in part, shaly and glauconitic; silicified.
- 4010-4065 Siltstone, light to medium grey-brown, very sandy, glauconite abundant; matrix silicified and tight. Numerous fractures lined with dolomite crystals; possible fracture porosity.
- 4065-4190 Siltstone, medium to dark grey-brown, shaly and glauconitic; locally sandy and silicified. Shale (30%) dark grey, waxy, pure.
- 4190-4240 Sandstone, light to medium grey-brown, very fine-grained, glauconitic and silicified. Tight except for streaks with poor intergranular porosity. Siltstone (10% - 50%) medium to dark grey-brown, sandy, interbedded with sandstone.
- 4240-4265 Siltstone, dark grey-brown, sandy, with interbedded shale, dark grey, silty. Minor sandstone as above.
- 4265-4300 Sandstone, light grey-white, very fine-grained, silty, glauconitic; generally silicified and tight. Streaks of poor intergranular porosity.
- 4300-4320 Siltstone, dark grey-brown, interbedded with shale, dark grey.
- 4320-4350 Sandstone, light grey-brown, very fine-grained, silty, glauconitic; generally silicified and tight except for occasional streaks of poor intergranular porosity.

- 4350-4400 Shale (50%), dark grey to black, fissile, micromicaceous, slightly silty. Siltstone (50%), dark grey-brown, shaly micaceous.
- 4400-4440 Siltstone (80%), medium to dark brown and grey-brown, shaly, slightly sandy in part. Shale (20%) - as above.
- 4440-4485 Shale, medium to dark grey, silty, micromicaceous; fairly soft; sub-fissile to fissile.
- 4485-4510 Siltstone, light grey-brown, coarse, sandy to very sandy, glauconitic, silicified; subquartzose grains. Abundant calcite crystals infilling fractures.
- 4510-4530 Shale, dark grey-brown, silty to very silty, poorly fissile, micromicaceous.
- 4530-4600 Shale (70%), as above, grading to: Siltstone (30%), dark grey-brown, shaly. Minor interbeds of light grey-brown, sandy, siliceous coarse siltstone towards base of interval.
- 4600-4615 Shale, dark grey-brown, very silty in part; abundant ironstone nodules. Minor sandstone, light grey, very fine-grained, glauconitic.
- 4615-4630 Sandstone, light brown, very glauconitic, silty, shaly, silicified and tight. Abundant ironstone nodules.
- 4630-4647 Sandstone, cream to white, fine to medium grained, quartzose grains, glauconitic; sorting fair, grains subrounded to well rounded. Partly silica cemented, but stringers of fair intergranular porosity. No shows.
- 4647-4699 See descriptions Cores #1 and #2.
- 4699-4710 Sandstone, fine-grained (0.10 mm), pale grey siliceous. Well sorted, subround to subangular quartz grains, rare glauconite, in siliceous matrix. Trace of spotty porosity, in part bitumen lined. No fluorescence or cut. Much shale cavings.
- 4710-4740 Sandstone, as above. Traces of porosity, trace of bitumen, as above. No cut or fluorescence. Decrease in shale cavings.
- 4740-4780 Sandstone, fine-grained, grey and brown, fairly well sorted quartz grains subround to subangular, trace of glauconite. Argillaceous in part. Much (30%) interbedded dark brown-grey noncalcareous, blocky shale. Pockets of poor to fair intergranular porosity, much dead oil stain, no cut or fluorescence.

- 4780-4790 Sandstone, fine-grained, pale grey, quartzose, siliceous, trace of glauconite. 30% sandstone, brown, slightly argillaceous, fine-grained, dead oil staining in pockets of porosity. No cut or fluorescence.
- 4790-4810 Sandstone, medium grained, few coarser grains, pale grey, siliceous cement, traces kaolinitic, trace of calcareous cement. Subround to subangular, poor to fair sorted quartz grains, trace of glauconite. Few argillaceous pockets and brown-grey shale beds. Spotty porosity, dead oil - no cut or fluorescence.
- 4810-4820 Sandstone, medium to coarse grained, to fine grit, well rounded to subrounded, poorly sorted quartz grains, siliceous cement, trace of calcareous cement, some anhedral quartz, few sideritic grit streaks. Trace of fossil fragments. Trace of porosity, no stain, cut or fluorescence.
- 4820-4830 Sandstone, fine to medium grained, brown-grey, vitreous, quartzose, siliceous, slightly calcareous glauconitic. Fairly well sorted, subangular to subrounded quartz grains, siliceous, part sideritic matrix. Trace of fossils, trace of pyrite, fractures. Trace of intergranular porosity, no cut or fluorescence.
- 4830-4850 Sandstone, fine-grained, brown-grey, vitreous, quartzite, trace of glauconite. Well sorted subround to subangular grains, siliceous cement. Trace of fossil fragments, trace of fractures. Tight.
- 4850-4870 Sandstone, fine-grained, brown and grey, vitreous, siliceous, tight. Fair to well sorted, subround to subangular quartz grains, siliceous matrix, traces of glauconite. Traces of argillaceous, bituminous partings.
- 4870-4900 Sandstone, fine-grained, brown, vitreous, siliceous, much argillaceous-bituminous sandstone. Trace of fractures. Trace of bituminous partings. Traces of pyrite lining fractures. Minor dark brown sandy, siliceous shale.
- 4900-4910 Sandstone, fine-grained, pale brown-grey, vitreous, noncalcareous. Well sorted, subangular quartz grains, traces of glauconite, traces of iron staining, siliceous matrix; intergranular pyrite. Evidence of fracturing, in part pyrite-lined.
- 4910-4920 Sandstone, as above. More friable in appearance, trace of intergranular porosity, no cut or fluorescence.
- 4920-4930 As above. Much dark grey and black shale - cavings.

- 4930-4940 Sandstone, light brown-grey, fine-grained, siliceous, vitreous. Well sorted, subangular quartz grains, siliceous matrix, glauconitic. Trace of pyrite, trace of iron staining. Trace of interbedded dark brown sandy, glauconitic shale.
- 4940-4980 Sandstone, light brown-grey, fine-grained, few streaks of medium to coarse grained sand, vitreous, well sorted, subangular quartz in a siliceous matrix, traces of glauconite. Trace of pyrite, iron staining. Trace of fracture surfaces.
- 4980-5013 Sandstone, pale grey-brown and pale grey, fine-grained - well sorted quartz grains, subangular, in a siliceous matrix, minor glauconite. More friable in appearance, trace of intergranular porosity - no cut or fluorescence. Trace of pyrite - partly infilling fractures.
- 5013-5020 N.S.
- 5020-5030 Sandstone, fine-grained, streaks of medium grained sandstone, pale grey and pale brown-grey vitreous, trace glauconitic. Subangular, fairly well sorted quartz grains, scattered glauconite, in a siliceous matrix. Trace of kaolin. Trace of pyrite as pore filler and fracture lining. Trace of fracture porosity, dead oil staining, no cut or fluorescence.
- 5030-5060 Sandstone, fine-grained, grey-brown, vitreous, trace of glauconite, siliceous. Subangular, fairly well sorted quartz grains in a siliceous matrix. Trace of fracture and intergranular porosity, dead brown-grey oil stain, no cut or fluorescence. Trace of pyrite. Minor interbedded dark brown sandy shale.
- 5060-5070 Sandstone, fine-grained, pale grey, vitreous, and grey-brown, siliceous, hard. Trace of glauconite and pyrite. Subangular quartz grains, fairly well sorted, in a siliceous matrix, trace of kaolin. Friable in part - abundant free medium to coarse quartz grains and granular clusters. Trace of intergranular porosity, fractures. No cut or fluorescence. Minor dark grey shale and sandy shale - cavings in part.
- 5070-5080 (Circulated Sample) Sandstone, brown, fine-grained, subangular, well sorted quartz grains, siliceous matrix, vitreous. Traces of fractures, intergranular porosity, dead oil staining, no cut or fluorescence.
- 5080-5090 Sandstone, light brown-grey and pale grey, vitreous, siliceous; as above, trace of glauconite. Much fracturing, traces of dead oil staining, trace of intergranular porosity, no cut or fluorescence.

- 5090-5130 Sandstone, fine-grained, pale grey, vitreous, and brown-grey. Subangular well sorted quartz grains, trace of glauconite and kaolin, in a dense, siliceous matrix. Trace of pyrite, trace of dark brown sandy shale. Fractures; in part bitumen-lined.
- 5130-5150 Sandstone, fine-grained, pale grey, vitreous, subangular, well sorted quartz grains, trace of kaolin and glauconite, in siliceous matrix. Trace of fractures, trace of bitumen in fractures, traces of spotty intergranular porosity. No cut or fluorescence.
- 5150-5160 Sandstone, fine grained, pale grey, vitreous, siliceous - well sorted, subangular quartz grains trace of glauconite, in a siliceous matrix. Trace of spotty, leached porosity, few argillaceous partings. No cut or fluorescence.
- 5160-5170 Sandstone, as above. Minor grey and dark grey shale, sandy shale, grading to dark brown argillaceous sandstone. Trace of brown chert fragments. Trace of pyrite.
- 5170-5250 Sandstone, pale grey, fine-grained, vitreous, noncalcareous. Well sorted, subangular quartz grains, trace of glauconite in a siliceous matrix. Tight. Few argillaceous pockets and partings. Trace of fractures.
- 5250-5260 Shale, dark grey and dark brown, noncalcareous, blocky, silty and trace sandy in part. Traces of pyrite, slickensides, trace of lamination.
- 5260-5290 Sandstone, fine-grained, pale grey, vitreous. Fairly well sorted, subangular quartz grains in a siliceous matrix. Trace of coarse calcareous sandstone. Much dark grey, dark brown shale, as above. Trace of fractures.
- 5290-5300 Shale, dark brown, silty, sandy in part, blocky, noncalcareous, grading in part to very argillaceous dark brown, fine sandstone.
- 5300-5340 Sandstone, silty, very argillaceous, very fine-grained, dark brown, blocky, noncalcareous, trace of glauconite, grading to dark brown, silty shale. Minor dark grey, noncalcareous shale. Trace of pyrite. Minor interbedded pale grey, fine-grained sandstone with scattered, dark grey chert pebbles.
- 5340-5350 Sandstone, very fine-grained, silty, very argillaceous, dark brown, noncalcareous. Trace of scattered medium and coarse sized chert pebbles. Minor dark grey blocky, noncalcareous shale.

- 5350-5370 Sandstone, very argillaceous, silty, very fine-grained to fine-grained, dark brown as above. Minor pale grey, fine-grained, siliceous, vitreous sandstone - quartz grains in a siliceous matrix. Minor dark grey, blocky, noncalcareous shale, to slightly calcareous shale.
- 5370-5400 Shale, dark grey, blocky, noncalcareous, trace pyritic worm borings. Much interbedded dark grey-brown silty and sandy shale, blocky, noncalcareous, grading to silty, argillaceous fine to medium sandstone.
- 5400-5480 Sandstone, very fine to fine-grained, dark brown, silty, argillaceous, slightly calcareous to noncalcareous, grading in part to dark brown silty shale. Minor interbedded dark grey, sub-fissile to blocky, noncalcareous shale.
- 5480-5490 Sandstone, pale grey-brown, very fine to fine-grained, calcareous, siliceous, tight. Trace of glauconite. Subangular quartz, minor chert grains, poor to fair sorting. Pockets or streaks of coarse chert grains, scattered traces of glauconite. Much dark brown silty shale, ironstone.
- 5490-5510 Sandstone, fine to medium grained, grey, S & P, noncalcareous, to slightly calcareous. Poorly sorted, subangular to subround quartz and chert grains, scattered pockets and streaks of coarse grey chert grit in sandstone matrix. Much interbedded brown silty shale and argillaceous sandstone.
- 5510-5540 Sandstone, medium grained, grey, S & P, faintly calcareous, subangular quartz grains, fair sorting, siliceous, calcareous cement, as matrix to scattered coarse chert grit - grey, green-grey chert grains. Fractures. Minor grey brown and brown argillaceous sandstone and dark brown silty shale and siltstone.
- 5540-5570 Sandstone, medium grained, grey S & P, as above. Chert grit, as above. Much dark brown siltstone and dark grey shale.
- 5570-5630 Sandstone, fine to medium grained, grey, S & P, faintly calcareous, fairly well sorted, subangular quartz and chert grains, siliceous, faintly calcareous matrix, very argillaceous in part, and darker in color. Scattered coarse chert grains. Minor interbedded dark grey shale, brown siltstone. Fractures.
- 5630-5640 Sandstone, as above. Increase in black, fissile shale. Trace of brown-grey fine-grained sandstone, trace of intergranular porosity. No cut or fluorescence.
- 5640-5660 Sandstone, medium grained, grey, S & P, faintly calcareous. Dark grey and grey chert pebbles, grey quartz, subangular to subround, in siliceous, slightly calcareous matrix. Tight. Much (40%) dark grey to black fissile shale. Scattered coarse chert grains in sandstone. Trace of fractures and calcite veining.

- 5660-5670 Shale, dark grey, splintery to blocky, noncalcareous, streaks of micaceous shale.
- 5670-5680 Sandstone, grey, S & P, dark grey and grey chert grains, grey quartz, in a siliceous, slightly calcareous matrix. Medium size grains, subrounded, poor to fair sorting. Trace of calcite veining.
- 5680-5690 Sandstone, as above. Much interbedded grey, S & P silt, and dark grey shale.
- 5690-5710 Shale, grey and dark grey, blocky to sub-fissile, micromicaceous, noncalcareous. Minor dark medium brown-grey blocky, silty shale, calcareous in part. Much grey, chert sandstone, as above.
- 5710-5750 Shale, grey and dark grey, blocky to sub-fissile, noncalcareous. Minor interbedded dark brown, argillaceous siltstone and fine sandstone, oil stained appearance, no fluorescence, questionable cut in chloroethene. Traces of fractures, calcite veining and slickensides.
- 5750-5800 Shale, dark grey, sub-fissile, micromicaceous, noncalcareous. Trace of grey, silt streaks.
- 5800-5810 Shale, as above. Minor fine-grained, brown-grey, S & P, argillaceous sandstone, slightly calcareous, siliceous, light.
- 5810-5840 Shale, grey and dark grey, fissile, noncalcareous, micromicaceous. Interbedded grey, very fine grained, argillaceous sandstone, faintly calcareous. Trace of slickensided shale, fractures. Trace of pyrite.
- 5840-5880 Shale, dark grey and black, fissile, noncalcareous, micromicaceous, few silty streaks. Minor interbedded grey, argillaceous sandstone, as above. Trace of pyrite. Trace of fractures.
- 5880-5980 Sandstone, grey, S & P, fine to medium grained chert and quartz sandstone, siliceous cement, faintly calcareous. Grains are subangular to subround, poorly sorted. Scattered coarse chert grains. Calcite veining, fracturing. Minor interbedded dark grey, sub-fissile micromicaceous, noncalcareous shale. Trace of pyrite.
- 5980-6020 Sandstone, medium grained, grey, S & P, much coarse chert grains in a medium grained siliceous sandstone matrix. Poorly sorted, subrounded to subangular, much interstitial silt. Minor dark grey, sub-fissile to fissile shale, noncalcareous, micromicaceous, traces of silty and sandy shale.

- 6020-6050 Sandstone, medium grained, grey, S & P, much coarse grey chert grains, subrounded in a sandstone matrix. Siliceous cement, slightly limey. Trace of green chert. Minor interbedded dark grey micromicaceous, noncalcareous shale (30%).
- 6050-6070 Sandstone, fine to medium grained, scattered coarse chert grains, grey and light grey, trace of grey-green chert, silty, argillaceous matrix, siliceous cement, faintly calcareous. Shale, 20% - grey and dark grey, sub-fissile to blocky, noncalcareous, micromicaceous. Calcite veining, fracturing.
- 6070-6080 Sandstone, fine to medium grained, few coarse grey chert grains, grey and dark grey, argillaceous, silty, faintly calcareous, siliceous. Minor (20%) dark grey, sub-fissile to blocky shale, dark grey and grey siltstone.
- 6080-6090 Sandstone, very fine grained, grey, S & P, grading to grey, argillaceous siltstone and grey, silty, coarse sandstone - coarse fraction includes grey and rare green chert grains. faintly calcareous, siliceous, argillaceous. Shale 10%, dark grey and black, blocky to sub-fissile, silty streaks. Traces of silt laminae. Traces of calcite veining and fractures.
- 6090-6131 Siltstone 40%, grey, faintly calcareous, siliceous, grading to medium grained sandstone, and to silty shale. Minor (20%) dark grey and grey, noncalcareous shale.

T.D. 6131

(e) Paleontological Determinations

0-3660	No determinations
3660-3880	Barremian
3960-4280	Hauterivian
4360-4520	Hauterivian or older Lower Cretaceous
4620-4890	Oxfordian to Portlandian
4960-5350	Probable Jurassic (undef.) age
5420-6063	Upper Devonian? (Frasnian/Famennian)

SECTION III

Engineering Summary

(a) Report of Drillstem Tests

DST #1 4609' to 4699' Dual Bottom Hole

Zone: Johnson Creek

Times: Pre-Flow 5 mins., initial shut-in 60 mins., valve open
60 mins., final shut-in 120 mins.

Recovery: 540 feet of water cut mud and 3709 feet of water.

Pressures: IHP - 2352 FSIP - 2303
 ISIP - 2292 FHP - 2332₀
 IFP - 339 BHT - 108⁰F.
 FFP - 1911

Remarks: Test satisfactory.

DST #2 3950' to 4230' Dual Straddle

Zone: Basal Cretaceous

Times: Pre-Flow 5 mins., initial shut-in 30 mins., valve open
90 mins., final shut-in 150 mins.

Recovery: Gas to surface on pre-flow
Gas to surface on V.O. 44 Mcf/D in 30 mins. decreasing to
29 Mcf/D at the end of V.O. Recovered 940 feet slightly
gas cut mud.

Pressures: IHP - 2109 FSIP - 1959
 ISIP - 1936 FHP - 2109
 IFP - 157 BHT - 108⁰F.
 FFP - 423

Remarks: Test satisfactory.

DST #3 4230' to 4355' Dual Straddle

Zone: Johnson Creek

Times: Pre-flow 5 mins., initial shut-in 30 mins., valve open
90 mins., final shut-in 150 mins.

Recovery: Poor air blow on V.O. recovered 560' of mud, 180' of slightly gas cut mud and 270' of mud cut water.

Pressures: IHP - 2259 FSIP - 2109
 ISIP - 2040 FHP - 2259
 IFP - 263 BHT - 108^oF.
 FFP - 527

Remarks: Test satisfactory.

(b) Casing Record

Conductor Pipe

25' of 23" O.D., 18½" I.D. ¼" wall, insulated concentric conductor pipe with ¾" O.D. cooling coils. 21' of 19" O.D. ¼" wall conductor pipe set at 66' K.B.

Cemented conductor pipe with 200 sax of BJ cold set cement.

Surface Casing

Ran 27 joints (886.61') of 13-3/8", 54.5# K-55, 8 Rd., Rge. 2, new, seamless, ST & C casing landed at 881.81' K.B.

Cemented casing with 950 sax Type I construction cement plus 3% CaCl₂. Cement in place at 1115 hours, January 16, 1973. Circulated approximately 100 sax of cement.

No intermediate or production casing strings were run.

(c) Bit Record

See attached bit record.

(d) Mud Report

The 17½" surface hole was drilled to 886' using stable foam. The hole was then displaced to a gel-water mud. The following materials were used on surface:

Sulfotex Sal	11 Bbls.
Van Foam	1 Bbl.
Gel	145 Sax
Caustic	3 Sax
Sawdust	65 Sax

The 8-3/4" main hole was drilled to 6131 using a Gel-water-Rapidril system. The following materials were used on the main hole:

Gel	967 Sax
Wt. Material	1296 Sax
Bicarb. of Soda	4 Sax
Caustic	53 Sax
Soda Ash	4 Sax
Rapidril	380 Lbs.
CMC	7 Sax
Sawdust	780 Sax
Fiber Tex	105 Sax

(e) Deviation Record

60 - 1/2	1335 - 3-3/4	2574 - 8	4177 - 1-1/2
105 - 1/4	1368 - 3-1/2	2605 - 7-1/4	4236 - 2-1/8
170 - 1-1/4	1398 - 3-1/2	2635 - 7-1/8	4299 - 2-1/8
195 - 3/4	1460 - 3-7/8	2670 - 7	4390 - 1-1/2
223 - 1	1495 - 4-1/4	2702 - 7-1/4	4445 - 1-1/2
251 - 1-1/8	1523 - 3-3/4	2737 - 7-1/4	4547 - 1-1/2
290 - 1	1555 - 4	2770 - 6-1/2	4612 - 1-3/4
317 - 1	1595 - 4	2800 - 6-1/4	4647 - 7/8
348 - 1	1620 - 4-1/4	2830 - 5-1/2	4678 - 7/8
370 - 1-1/4	1647 - 4-1/4	2860 - 5-1/4	4720 - 7/8
410 - 1-1/2	1692 - 4-1/4	2892 - 4-7/8	4777 - 7/8
440 - 1	1723 - 4-1/4	2925 - 4-1/2	4868 - 1
470 - 1-3/4	1753 - 4	2955 - 4-3/4	4954 - 1
500 - 1-1/2	1785 - 4-1/8	2985 - 4-1/2	5011 - 1
533 - 1-1/2	1805 - 4-1/8	3015 - 5	5045 - 1/2
563 - 1-3/4	1840 - 4-1/2	3050 - 5	5170 - 2
600 - 1-1/4	1870 - 4-1/2	3080 - 4-1/2	5220 - 3
626 - 1-3/4	1943 - 4-3/4	3111 - 4-1/4	5255 - 3
658 - 1-1/2	2005 - 4-1/2	3143 - 4-1/8	5287 - 2-3/4
690 - 1-1/2	2060 - 5	3205 - 3-3/4	5345 - 2-3/4
720 - 1-1/2	2090 - 5-1/2	3270 - 3-1/4	5470 - 2
752 - 1-1/2	2146 - 6	3300 - 3	5610 - 3-3/4
783 - 1-3/4	2165 - 6	3338 - 2-3/4	5689 - 6-1/4
810 - 1-1/2	2195 - 6-1/8	3375 - 3	5703 - 6
841 - 1-3/4	2225 - 6-1/4	3437 - 2-3/4	5764 - 6-1/2
876 - 2	2265 - 6-1/2	3491 - 2	5814 - 6-1/4
935 - 2-1/4	2297 - 7	3554 - 1-1/2	5849 - 6-1/4
965 - 2-1/4	2325 - 6-1/4	3627 - 1-3/4	5882 - 6-1/2
1025 - 2-3/4	2355 - 6-3/4	3658 - 1-1/8	5922 - 7
1064 - 2-3/4	2387 - 6-5/8	3716 - 1/2	5952 - 6-1/4
1126 - 3	2418 - 7	3767 - 1	5984 - 6-1/2
1150 - 3-1/8	2449 - 6-7/8	3828 - 1-1/4	6019 - 6-1/4
1179 - 3	2480 - 7-1/8	3934 - 2-1/4	6070 - 7-1/4
1220 - 3	2510 - 7-3/4	3987 - 1-5/8	6131 - 9-1/2 T.D.
1283 - 3	2543 - 7-3/4	4085 - 2	

(f) Abandonment Plugs

Plug #1 (6131' - 5850')	160	Sax Type I cement
Plug #2 (4700' - 4500')	145	Sax Type I cement + 2% CaCl ₂
Plug #3 (4100' - 3900')	130	Sax Type I cement + 2% CaCl ₂
Plug #4 (950' - 850')	120	Sax Type I cement + 3% CaCl ₂
Suface Plug	5	Sax Type I cement

(g) Lost Circulation Zones

Lost circulation at 5013 while drilling main hole. Lost approximately 645 bbls. of mud over a period of eight days. Obtained returns by mixing Gel, Rapidril Sawdust and Fiber Tex.

(h) Report of Blowouts

No blowouts on this well.

SECTION IV

Logs

The following Dresser Atlas Logs were run on March 29 - 31, 1973:

BHC Acoustilog/Gamma Ray/Caliper (6123'-882')(6123'-50')
Dual Induction Focused Log (6120'-882')
Compensated Densilog/GR/Caliper (6122'-882')(6120'-882')

SECTION V

Analysis

(a) Core Analysis

Core analysis enclosed in back folder.

(b) Water Analysis

Water analysis enclosed in back folder.

(c) Gas Analysis

Gas analysis enclosed in back folder.

(d) Oil Analysis

No oil analysis.

SECTION VI

Completion Summary

(a) Tubing Record

No tubing run.

(b) Perforations

No perforations.

(c) Cementation Record

Abandonment Plug #1 (6131'-5850')

Cemented with 160 sax Type I Portland Cement.

Cement in place 1345 hours April 1, 1973. No feel on plug #1.

Abandonment Plug #2 (4700'-4500')

Cemented with 145 sax Type I Portland Cement + 2% CaCl₂.

Cement in place 1555 hours April 1, 1973. Felt plug #2 at 2330 hours at 4465 feet.

Abandonment Plug #3 (4100'-3900')

Cemented with 130 sax Type I Portland Cement + 2% CaCl₂. Cement in place 0230 hours April 2, 1973. Felt plug #3 at 1000 hours at 3855 feet.

Abandonment Plug #4 (950'-850')

Cemented with 120 sax Type I Portland Cement + 2% CaCl₂. Cement in place 1215 hours April 2, 1973. Felt plug #4 at 1945 hours at 835 feet.

(d) Acidization and Fracturing Record

No acidizing or fracturing operations.

(e) Back Pressure and Production Tests

No back pressure or production tests.

CHEVRON STANDARD LIMITED
BIT RECORD

WELL NAME Chevron SIPC Gulf Ridge F-48 CONTRACTOR Numbers 1 RIG No. 1 PUMP No 1 Emeco D-700

SPUD DATE Jan 3 1973 RIG RELEASED _____ DRILLING DAYS _____ PUMP No. 2 Delwell 1218

BIT No.	MAKE	SIZE	TYPE	DEPTH		FOOTAGE	TIME	DRLG. RATE	NOZZLE SIZES	JET VEL	WEIGHT M #	RPM	No. 1 PUMP		No. 2 PUMP		PUMP PSI	HHP AT BIT	DP ANN.	DC ANN.	MUD		DULL COND.			DEV.		
				FROM	TO								LINER	SPM	LINER	SPM					WT.	VIS	T	B	G			
21	Sec	8 3/4	DSS	2307	2523	216	20		2-11 1-10		7-9	75 55	5 1/2 x 1 1/2	60			1350				8.9	42	1	1	1	8°	43	
22	Sec	8 3/4	DS	2523	2553	32	5 1/4		2-11 1-10		7	80	..	..			1350				8.7	42	2	2	1	7 1/4	91
23	Sec	8 3/4	DS	2553	2724	169	16 1/4		2-11 1-10		7	80	..	..			1400				8.9	46	2	2	1	7 1/4	26
24	Sec	8 3/4	DS	2724	2808	84	8 1/4		2-11 1-10		7	80	5 1/2 x 1 1/2	60			1350				8.9	44				6 1/2	91	
25	Sec	8 3/4	DS	2808	3075	267	19 3/4		2-11 1-10		10-6	80	..	..			1400				8.9	48	2	3	1	5°	91
26	Sec	8 3/4	DSS	3075	3338	263	22 1/2		1-10 1-12		7-16	70	5 1/2 x 1 1/2	60			1200				8.9	44	3	1	1	2 3/4	91	
27	Sec	8 3/4	DSS	3338	3658	320	27		1-10 1-12		16-22	70	5 1/2 x 1 1/2	60			1300				8.9	43	3	1	1	1 1/8	91	
28	Sec	8 3/4	SBE	3658	4177	519	5 1/4		1-10 1-12		18-22	55	5 1/2 x 1 1/2	60			1350				9.2	45	2	3	1	2	34	
29	Sec	8 3/4	MBE	4177	4547	370	71		1-10 1-12		20-23	55	5 1/2 x 1 1/2	60			1350				9.6	52	3	8	1	1 1/2	37	
30	Sec	8 3/4	MBS	4547	4647	100	20		1-10 2-12		25-30	50	..	60			1350				9.5	50	4	2	1	1°	34	
31	◇	6 1/2		4647	4674	27	3 3/4		Open		12	90	✓	35			625				9.5	70					72	
32	Sec	8 3/4	H77	4674	4679	32	8 1/2		1-10 2-12		12-25	60	✓	60			1250				9.5	60	6	2	1	1°	34	
33	◇	6 1/2		4679	4699	20	5		Open		10	70	✓	35			500				9.6	60					7 1/2	72
34	REED	8 3/4	SBVG	4679	4699	20	3 3/4		1-10 1-12	390	12	80	5 1/2 x 1 1/2	60			1350	230	142		9.5	65	3	2	1		78	
35	WRB	8 3/4	J88	4699	4747	48	14 1/4		1-10 1-12	390	25-40	45-50	✓	60			1400	230	142		10.1	70	1	1	0	7 1/2	D	
36	Sec	8 3/4	MBS	4747	4923	176	34 3/4		2-12		15- 40	40- 45	✓	✓			1250				10.1	72	8	8	8	1°	239	
37	H.W	8 3/4	JDE	4835	4872	37	2 1/2		2-12 1-11		2	95	✓	-			1250				10.1	75	1	1	1		514	
38	H.W	8 3/4	J63	4872	4923	51	12 1/4		Open		2-3	50	✓	60			500				10.1	65	1	1	1		FS	
39	H.W	8 3/4	JDE	4923	4923	-	2 1/2		2-12 1-11		20 25												3	1	0 1/2		514	
40	H.W	8 3/4	WDR	4923	4936	13	6		2-12 1-11		22- 25	40- 60		60			1250				10.1	87	6	4	1		50	
41	Sec	8 3/4	HAT	4936	4958	22	9 1/4		2-12 1-11		20- 40	40		60			1250				10.2	75	6	2	1	1°	91	
42	H.W	8 3/4	WDR	4958	4968	10	3 1/2		2-12 1-11		35	50		60			1250				10.2	65	6	1	1		40	
43	H.W	8 3/4	RG2 BX	4968	5014	46	20		2-12 1-11		40	40		60			1250				10.1	60	4	1	1		FS	

CHEVRON STANDARD LIMITED BIT RECORD

WELL NAME Chevron 500C Gulf Ridge FVE CONTRACTOR Nubors RIG No. 1 PUMP No 1 Emsco D-700
 SPUD DATE Jan 3/73 RIG RELEASED _____ DRILLING DAYS _____ PUMP No 2 Delwell P218

BIT No.	MAKE	SIZE	TYPE	DEPTH		FOOTAGE	TIME	DRLG. RATE	NOZZLE SIZES	JET VEL	WEIGHT M #	RPM	No. 1 PUMP		No. 2 PUMP		PUMP PSI	HHP AT BIT	DP ANN.	DC ANN.	MUD			DULL COND.			DEV.	
				FROM	TO								LINER	SPM	LINER	SPM					WT	VIS	T	B	G			
44	HW	8 3/4	R	5216	5234	18	12 3/4		3-16		40	5-35	5 1/2 x 16	58			550					9.6	78	2	1	1	1°	Simi
45	HW	8 3/4	R	5234	5237	3	2		3-16		30	40	✓	58			550					9.4	78	4	1	1	1°	RJ R FS
46	Reed	8 3/4	FHG	5237	5252	15	7 1/2		3-18		30	60	✓	60			600					9.5	80	6	2	1	1/2°	200
47	Smith	8 3/4	9JS	5252	5223	173	46 1/4		3-14		40 45	40 45	✓	60			800					9.7	74	3	1	1	2°	LP2
48	Sec	8 3/4	H-100	5223	5255	32	10 1/4		2-16 1-14		40 45	25 45	✓	60			800					9.7	70	2	1	1	3°	413
49	HW	8 3/4	R	5255	5261	6	3 1/4		2-16 1-14		45	25 45	✓	50			650					9.7	85	1	1	1	3°	293
50	Reed	8 3/4	FHG	5261	5282	21	9		1-16 2-13		35	63		60			600					9.6	82	4	1	1	2 3/4°	205
51	HW	8 3/4	253R	5282	5313	31	10 1/4		3-14		40 50	40 55		60			900					9.6	60	1	1	1	2 3/4°	40
52	HW	8 3/4	100	5313	5327	14	10 1/4		3-14		45	56		60			900					9.5	58	4	1	1	2 3/4°	46
53	Smith	8 3/4	4JS	5327	5610	283	36 1/2		3-14		45	50		60			900					9.7	62	2	2	1	3 3/4°	103
54	Smith	8 3/4	4JS	5610	5703	93	19		3-13		35	55		60			1070					9.6	68	1	1	1	6°	113
55	Sec	8 3/4	DMJ	5703	5764	61	17 1/2		2-13 1-14		20	62		60			900					9.7	65	3	4	1	6 1/2°	913
56	Sec	8 3/4	DMJ	5764	5815	51	16 3/4		2-13 1-14		18	62		60			950					9.6	61	3	4	1	6 1/4°	913
57	WAB	8 3/4	XDV	5815	5882	67	14 3/4		2-13 1-14		18	80		60			950					9.7	70	4	2	1	6 1/2°	3
58	Smith	8 3/4	4JS	5882	5925	43	15 1/2		3-13		18	50		60			1000					9.6	75	2	1	2	7	110
59	Sec	8 3/4	DMJ	5925	5922	29	10 3/4		2-13 1-14		18	45	65	50			1000					9.7	72	5	4	1	6 1/4°	44
60	HELD	8 3/4	FHG	5922	5984	62	14 1/4		3-13		25-30	60		60			1000					9.7	70	6	1	1	6 1/2°	20
61	HELD	8 3/4	SD10	5984	6019	35	11		3-13		30	60		60			1000					9.7	72	5	1	1	6 1/4°	46
62	Sec	8 3/4	H-100	6019	6131	112	47 3/4		3-13		45	40		60			1050					9.7	75					97
63	HW	8 3/4	XDV	6131	6131	-	-		2-13 1-14		-	-										9.7	72					82