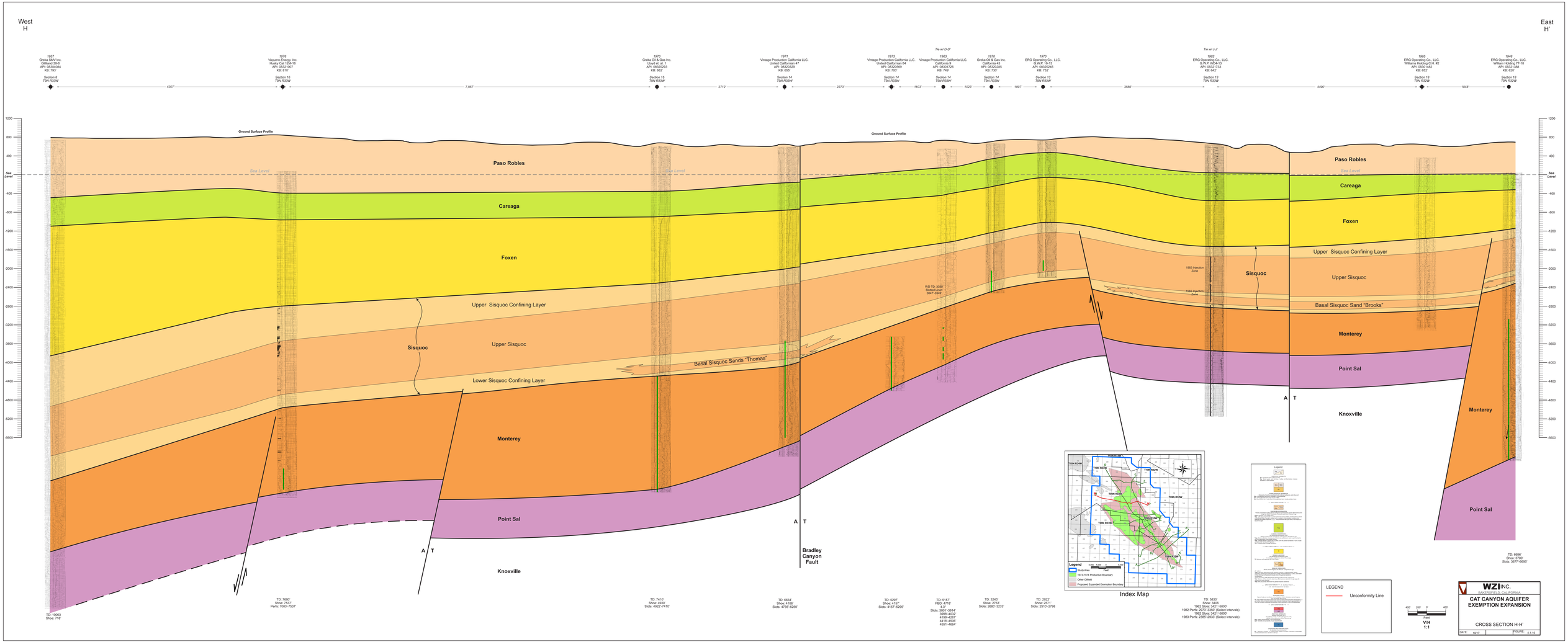
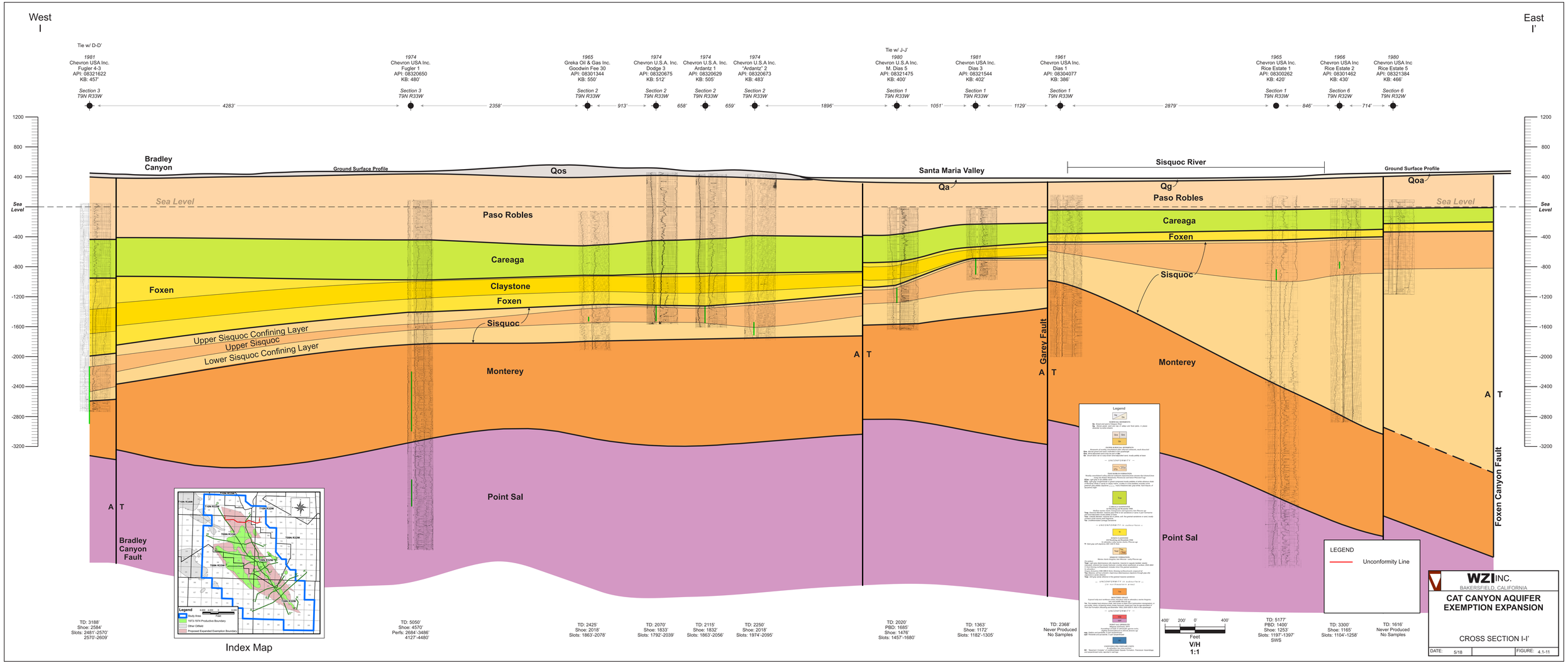
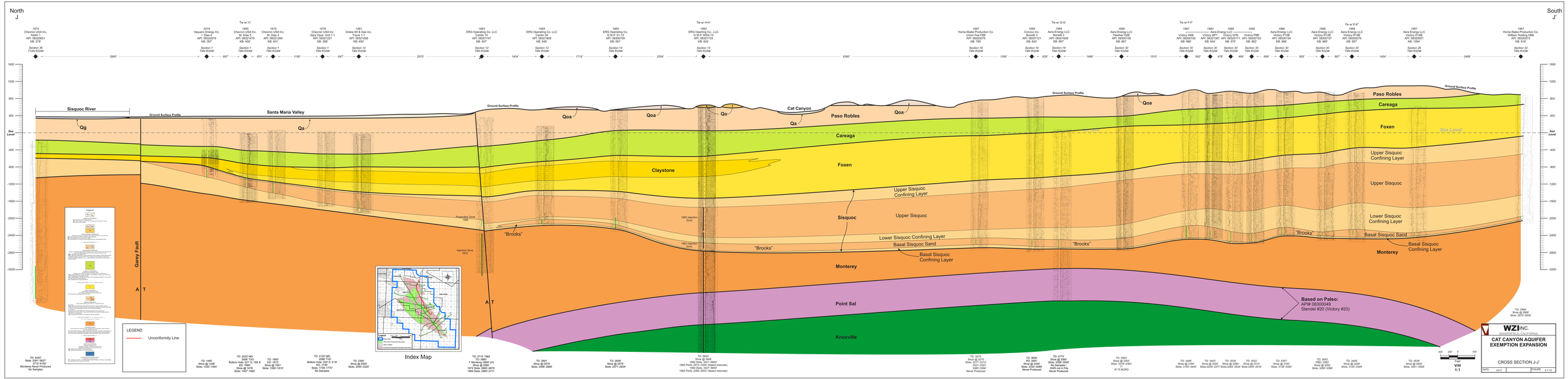

West
H
East
H'
1957
Greka SMV Inc.
Gilliland 36-8
API: 08304084
KB: 793
Section 8
T9N R33W
1976
Vaquero Energy, Inc.
Husky Cat 12M-16
API: 08321007
KB: 810
Section 16
T9N R33W
1970
Greka Oil & Gas Inc.
Lloyd et. al. 1
API: 08320293
KB: 662
Section 15
T9N R33W
1971
Vintage Production California LLC.
United Californian 47
API: 08320339
KB: 655
Section 14
T9N R33W
Tie w/ D-D'
1973
Vintage Production California LLC.
United Californian 84
API: 08320569
KB: 700
Section 14
T9N R33W
1963
Vintage Production California LLC.
California 9
API: 08301726
KB: 749
Section 14
T9N R33W
1970
Greka Oil & Gas Inc.
California 43
API: 08320285
KB: 730'
Section 14
T9N R33W
1970
ERG Operating Co., LLC.
G.W.P. 16-13
API: 08320340
KB: 752'
Section 13
T9N R33W
Tie w/ J-J'
1982
ERG Operating Co., LLC.
G.W.P. WD4-13
API: 08321733
KB: 642
Section 13
T9N R33W
1965
ERG Operating Co., LLC.
Williams Holding C.H. #2
API: 08301482
KB: 652
Section 18
T9N R32W
1948
ERG Operating Co., LLC.
William Holding 77-18
API: 08301388
KB: 620
Section 18
T9N R32W
4300'
7,957'
2712'
2273'
1103'
1023'
1097'
3566'
4490'
1948'
Ground Surface Profile
Sea Level
Paso Robles
Careaga
Foxen
Upper Sisquoc Confining Layer
Upper Sisquoc
Sisquoc
Basal Sisquoc Sands "Thomas"
Lower Sisquoc Confining Layer
Monterey
Point Sal
Knoxville
A T
Bradley Canyon Fault
R/D TD: 3350'
Slotted Liner
304'-3348'
1983 Injection Zone
1982 Injection Zone
Basal Sisquoc Sand "Brooks"
TD: 10003
Shoe: 718'
TD: 7680'
Shoe: 7537'
Perfs: 7083'-7537'
TD: 7410'
Shoe: 4892'
Slots: 4922'-7410'
TD: 6634'
Shoe: 4198'
Slots: 4735'-6250'
TD: 5297'
Shoe: 4157'
Slots: 4157'-5250'
TD: 5157'
PBD: 4719'
4.3"
Slots: 3801'-3914'
1982 Slots: 3421'-5800'
4198'-4232'
4416'-4506'
4557'-4664'
TD: 3243'
Shoe: 2763'
Slots: 2660'-3233'
TD: 2922'
Shoe: 2571'
Slots: 2810'-2798
TD: 5830'
Shoe: 3436
1962 Slots: 3421'-5800'
1982 Perfs: 2973'-3350' (Select Intervals)
1982 Slots: 3421'-5800'
1983 Perfs: 2385'-2933' (Select Intervals)
TD: 6696'
Shoe: 3700'
Slots: 3677'-6695'
Index Map
T10N R24W
T10N R23W
T10N R22W
T10N R21W
T9N R24W
T9N R23W
T9N R22W
T9N R21W
Legend
Study Area
1973-1974 Productive Boundary
Other Oilfield
Proposed Expanded Exemption Boundary
Legend
LEGEND
Unconformity Line
40' 20' 0' 40'
Feet
VH
1:1
WZI INC.
WATER SCIENCE & SOLUTIONS
CAT CANYON AQUIFER
EXEMPTION EXPANSION
CROSS SECTION H-H'
DATE: 10/17
FIGURE 4.1-10


West
I
East
I'
Tie w/ D-D'
1981
Chevron USA Inc.
Fugler 4-3
API: 08321622
KB: 457'
Section 3
T9N R33W
4283'
1974
Chevron USA Inc.
Fugler 1
API: 08320650
KB: 480'
Section 3
T9N R33W
2358'
1965
Greka Oil & Gas Inc.
Goodwin Fee 30
API: 08301344
KB: 550'
Section 2
T9N R33W
913'
1974
Chevron U.S.A. Inc.
Dodge 3
API: 08320675
KB: 512'
Section 2
T9N R33W
658'
1974
Chevron U.S.A. Inc.
Ardantz 1
API: 08320629
KB: 505'
Section 2
T9N R33W
659'
1974
Chevron U.S.A Inc.
"Ardantz" 2
API: 08320673
KB: 483'
Section 2
T9N R33W
1896'
Tie w/ J-J'
1980
Chevron U.S.A Inc.
M. Dias 5
API: 08321475
KB: 400'
Section 1
T9N R33W
1051'
1981
Chevron USA Inc.
Dias 3
API: 08321544
KB: 402'
Section 1
T9N R33W
1129'
1961
Chevron USA Inc.
Dias 1
API: 08304077
KB: 386'
Section 1
T9N R33W
2879'
1965
Chevron USA Inc.
Rice Estate 1
API: 08300262
KB: 420'
Section 1
T9N R33W
846'
1966
Chevron USA Inc
Rice Estate 2
API: 08301462
KB: 430'
Section 6
T9N R32W
714'
1980
Chevron USA Inc
Rice Estate 5
API: 08321384
KB: 466'
Section 6
T9N R32W
1200
800
400
Sea Level
-400
-800
-1200
-1600
-2000
-2400
-2800
-3200
Bradley Canyon
Ground Surface Profile
Qos
Santa Maria Valley
Qa
Sisquoc River
Qg
Qoa
Paso Robles
Careaga
Foxen
Claystone
Sisquoc
Upper Sisquoc Confining Layer
Upper Sisquoc
Lower Sisquoc Confining Layer
Monterey
Point Sal
Garey Fault
Bradley Canyon Fault
Foxen Canyon Fault
A T
TD: 3188'
Shoe: 2584'
Slots: 2481'-2570'
2570'-2609'
TD: 5050'
Shoe: 4570'
Perfs: 2684'-3486'
4127'-4480'
TD: 2425'
Shoe: 2018'
Slots: 1863'-2078'
TD: 2070'
Shoe: 1833'
Slots: 1792'-2039'
TD: 2115'
Shoe: 1832'
Slots: 1863'-2056'
TD: 2250'
Shoe: 2018'
Slots: 1974'-2095'
TD: 2020'
PBD: 1685'
Shoe: 1476'
Slots: 1457'-1680'
TD: 1363'
Shoe: 1172'
Slots: 1182'-1305'
TD: 2368'
Never Produced
No Samples
TD: 5177'
PBD: 1400'
Shoe: 1253'
Slots: 1197'-1397'
SWS
TD: 3300'
Shoe: 1165'
Slots: 1104'-1258'
TD: 1616'
Never Produced
No Samples
Index Map
Legend
Study Area
1975-1974 Productive Boundary
Other Oilfield
Proposed Expanded Exemption Boundary
Legend
LEGEND
Unconformity Line
400' 200' 0' 400'
Feet
V/H
1:1
WZI INC.
BAKERSFIELD, CALIFORNIA
CAT CANYON AQUIFER
EXEMPTION EXPANSION
CROSS SECTION I-I'
DATE: 5/18
FIGURE: 4.1-11


North
J
South
J'
1974
Chevron USA Inc.
Adam 1
API: 08320651
KB: 278'
Section 36
T10N R32W
3995'
1972
Vaquero Energy Inc.
L-Dias 4-1
API: 08320816
KB: 378'
Section 1
T9N R32W
897'
1980
Chevron USA Inc.
M. Dias 5
API: 08321475
KB: 400'
Section 1
T9N R32W
651'
1979
Chevron USA Inc.
M. Dias 3
API: 08321289
KB: 401'
Section 1
T9N R32W
1156'
1978
Chevron USA Inc.
Gary Open Unit 1-1
API: 08321227
KB: 398'
Section 1
T9N R32W
847'
1981
Greka Oil & Gas Inc.
Tryna 1-1
API: 08321656
KB: 450'
Section 12
T9N R32W
2870'
1963
ERG Operating Co. LLC
Cardo 14
API: 08301747
KB: 547'
Section 12
T9N R32W
1404'
1963
ERG Operating Co. LLC
Cardo 34
API: 08321859
KB: 546'
Section 12
T9N R32W
1718'
1982
ERG Operating Co.
G.W.P. 51-13
API: 08300700
KB: 591'
Section 13
T9N R32W
2054'
Tie w/ H-H'
1962
ERG Operating Co., LLC
G.W.P. WDA-13
API: 08321733
KB: 542'
Section 13
T9N R32W
6360'
1967
Home-Stake Production Co.
Union Fee R9B
API: 08300075
KB: 785'
Section 19
T9N R32W
1306'
1955
Conoco Inc.
Bonelli 3
API: 08301121
KB: 842'
Section 19
T9N R32W
628'
Tie w/ G-G'
1964
Aera Energy LLC
Bonelli 2
API: 08301609
KB: 842'
Section 19
T9N R32W
1466'
1968
Aera Energy LLC
Fleisher H2B
API: 08300139
KB: 861'
Section 30
T9N R32W
1510'
Tie w/ F-F'
1967
Victory R8B
API: 08300150
KB: 986'
Section 30
T9N R32W
562'
1985
Aera Energy LLC
Victory BP1
API: 08321587
KB: 934'
Section 30
T9N R32W
478'
1985
Aera Energy LLC
Victory NTB
API: 08320171
KB: 975'
Section 30
T9N R32W
499'
1949
Victory P8B
API: 08300153
KB: 962'
Section 30
T9N R32W
699'
1996
Aera Energy LLC
Victory R12B
API: 08300154
KB: 968'
Section 30
T9N R32W
955'
1966
Aera Energy LLC
Victory R1B
API: 08300157
KB: 966'
Section 30
T9N R32W
687'
Tie w/ E-E'
1966
Aera Energy LLC
Victory R14B
API: 08300576
KB: 957'
Section 30
T9N R32W
1454'
1967
Aera Energy LLC
Victory Z16B
API: 08320001
KB: 1094'
Section 29
T9N R32W
2489'
1967
Home-State Production Co.
William Holding H6B
API: 08320073
KB: 918'
Section 32
T9N R32W
1600
1200
800
400
Sea Level
-400
-800
-1200
-1600
-2000
-2400
-2800
-3200
Sisquoc River
Ground Surface Profile
Santa Maria Valley
Qg
Qa
Qoa
Qo
Cat Canyon
Paso Robles
Careaga
Foxen
Claystone
Sisquoc
Upper Sisquoc Confining Layer
Upper Sisquoc
Lower Sisquoc Confining Layer
Basal Sisquoc Sand
Basal Sisquoc Confining Layer
Monterey
Point Sal
Knoxville
Gaviy Fault
A T
"Brooks"
Production Zone 1964
Injection Zone 1972
1983 Injection Zone
1982 Injection Zone
Lower Sisquoc
Upper Sisquoc Confining Layer
Based on Paleo:
AP#8 08320049
Stendel #20 (Victory #20)
Legend
LEGEND
Unconformity Line
Index Map
TD: 4240'
Sloss: 3422'-3622'
3712'-4150'
Monterey Never Produced
No Samples
TD: 1460'
Show @ 1246'
Sloss: 1230'-1454'
TD: 2020' MD
2066' TVD
Bottom Hole: 1000' E, 160' E
Sloss: 1400'-1600'
Show @ 1476'
1457'-1882'
TD: 1890'
ED: 1.5 MMcf
Sloss: 1658'-1810'
TD: 2132' MD
2096' TVD
Bottom Hole: 1200' S, 9' W
ED: 2.0 MMcf
Sloss: 1739'-1770'
No Samples
TD: 2300'
Show @ 2040'
Sloss: 2040'-2220'
TD: 2715' 1964
TD: 3890'
T. Sisquoc @ 2400' (H)
Show @ 2900'
1972 Sloss: 2880-3879'
1964 Sloss: 2500-2717'
TD: 2691'
Show @ 2576'
Sloss: 2496'-2669'
TD: 2606'
Show @ 2575'
Sloss: 2571'-2634'
TD: 5600'
Show @ 3406
1964 Ports: 3400-3600' (Select Intervals)
1982 Ports: 2870-3350' (Select Intervals)
1982 Sloss: 3421-5600'
1963 Ports: 2300-2610' (Select Intervals)
TD: 3470'
Sloss: 3217'-3310'
Show @ 3307'
3307-3317
2383-3394'
Never Produced
TD: 3687'
Show @ 3330'
Sloss: 3294'-3487'
3294'-3487'
Never Produced
TD: 4772'
Show @ 3360'
Sloss: 3294'-3446'
3294'-3446'
SWD well in File
Never Produced
TD: 3320'
Show @ 3300'
Sloss: 3216'-3362'
IP 70 BOPD
TD: 3448'
Show @ 3180'
Sloss: 3155'-3442'
TD: 3402'
Show @ 3200'
Sloss:3209'-3337'
TD: 3334'
Show @ 3200'
Sloss:3284'-3534'
TD: 3322'
Show @ 3310'
Sloss:3300'-3516'
TD: 3337'
Show @ 3180'
Sloss: 3158'-3350'
TD: 3453'
Show @ 3300'
Sloss: 3280'-3390'
TD: 3445'
Show @ 3220'
Sloss: 3120'-3349'
TD: 3639'
Show @ 3440'
Sloss: 3401'-3508'
TD: 2966'
Show @ 2668'
Sloss: 2879'-2930'
400' 200' 0' 400'
Feet
Vertical Scale
1:1
WZI INC.
WATER ZONE INVESTIGATIONS
CAT CANYON AQUIFER
EXEMPTION EXPANSION
CROSS SECTION J-J'
DATE 10/17
FIGURE 4.1-12

4.1.3 Careaga Formation

The shallow marine Careaga Formation, of Pliocene age, unconformably underlies the Paso Robles Formation and is composed of an upper and a lower member. The upper member is a conglomerate composed of black igneous pebbles and ranges in thickness from 50 to 350 feet in thickness. The lower member of the Careaga Formation is separated from the upper member by a thin calcareous sandstone and can be 350 feet thick of loose yellow fine grained sand. Trending from the center of the study area into the adjacent valleys, the Careaga thickens. The Careaga outcrops in the southern portion of the study area and is absent on the southern portion of Gato Ridge (Worts & Thomasson, 1951), (Bradley & al, 1943). To the north of the study area (Northeast corner of Section 35, T10N, R33W) there is a small Careaga outcrop on Fugler Point with tar saturated sands, (Worts & Thomasson, 1951). The outcrop of the Careaga as reported by Worts contains tar, possibly migrating from the steeply dipping underlying Monterey. No tar or oil shows were reported in any of the water wells or exploration core holes which were drilled near the Careaga outcrop.

4.1.4 Foxen Formation

The Foxen Formation, while it has not been mapped on the surface, is a dark gray claystone marine deposit of Pliocene age. In some areas it has minor interbedded sandstones. The Foxen is primarily claystone and appears only in the subsurface. The thickness across the study area ranges from 200 feet to the north and east to up to 2,800 feet to the west and northwest, (Worts & Thomasson, 1951). It is absent on the southern portion of Gato Ridge, thickening to the north and south. The porosity of the Foxen Formation (based on core data) varies from 27% to 46% with permeability ranging from 5 to 0.8 millidarcy, (4.8×10^{-6} to 0.6×10^{-6} cm/s), having an average permeability of 1.8 millidarcy, (1.5×10^{-6} cm/s) in the silts and clays that provide the confinement. The core data is contained in **Appendix 4-1, Core Data and Well Histories** along with the tabulated values by well and zone. The Foxen claystone provides the upper confining element to the underlying Sisquoc Formation below the Upper Confining Layer across the entire proposed Aquifer Exemption Expansion Area.[7]

4.1.5 Sisquoc Formation

The lower Pliocene/Miocene marine Sisquoc Formation unconformably underlies the Foxen and is one of the prominent producing formations in the Cat Canyon Oil Field. The Sisquoc consists of an upper zone of siltstone and diatomaceous claystone underlain by thick fine- to coarse-grained sandstone and clay interbeds. These portions of these sandstone beds are productive over the majority of the field. The uppermost sandstone bed is identified as S1b and it pinches out to the north, south and west. The lower portion of the Sisquoc, similar to the Upper Sisquoc, consists of diatomaceous claystone, silty claystone and sandy siltstone. A basal sand which is oil productive is present to the east and west of Gato Ridge structures within the field and are identified by the following names in the subsurface: Brooks (East Area), Santa Margarita (Gato Ridge Area) and Thomas (Sisquoc Area). These sands, although deposited in the same horizon, are not stratigraphically connected as shown on Cross Section D-D' and H-H'(Figure 4.1-6a and 4.1-10, respectively). This basal sand is contained within the Lower Sisquoc claystone with an underlying claystone present above the Sisquoc/Monterey unconformity. The claystone above

[7] The upper portion of the Sisquoc Formation is primarily low permeability clays and also provides an areal extensive upper confining layer.

and below the basal Sisquoc Formation below the Upper Confining Layer provides the vertical confinement of the production intervals of the basal Sisquoc Formation below the Upper Confining Layer and the Monterey Formation below. The Sisquoc ranges from 1800 to 2500 feet thick and outcrops where the Howard Canyon crosses Gato Ridge, **Figure 4.1-2, Dibblee Surface Geologic Map**. As shown on Cross Sections A-A', B-B' and D'-D" (Figures 4.1-3, 4.1-4 and 4.6b, respectively) the Upper Sisquoc Formation below the Upper Confining Layer do not outcrop and are overlain by the Upper Sisquoc claystone. The porosity of the Sisquoc claystone that comprises the Upper Sisquoc Confining Layer based on core data is varies from 27% to 42% with permeability ranging from less than 1 to 95 millidarcy, (8.4 X 10^{-7} to 8 X 10^{-5} cm/s), having an average permeability of 15 millidarcy, (1.26 X 10^{-5} cm/s) in the silts and clays that provide the confinement. The Lower Sisquoc confining clay has permeability with a range from 100 to 0.03 millidarcy, (8.4 X 10^{-5} to 2.5 X 10^{-8} cm/s) with the average being 11 millidarcy, (9.2 X 10^{-6} cm/s). The core data is contained in **Appendix 4-I, Core Data and Well Histories** along with the tabulated values by well and zone.

4.1.6 Monterey Formation

The Monterey Formation of upper Miocene age in the Gato Ridge Area of the Cat Canyon Oil Field was identified as one of the most important naturally fractured reservoirs in the United States, (Hubbert & Willis, 1955). The Monterey is a deep water marine deposit, consists of three distinct lithologic members: an upper platy siliceous shale member, a middle fractured chert/dolomitic member and the lower limy shale member, (the Buff and Tan). In the Gato Ridge Area all three members were completed with about 60% of the production coming from the chert member. In the West Area, the cherty zone is the primary completion interval. The Monterey Formation thickness ranges from zero, where it pinches out on the basement complex to the east of Gato Ridge, to over 2,500 feet over most of the study area. A maximum thickness of approximately 4,000 feet occurs in the Olivera Area. The Monterey chert zone has an estimated permeability of 10^{-15} darcy (8.4 x 10^{-3} to 1.26 x 10^{-2} cm/s) with a maximum of 35 darcy (2.94 x 10^{-2} cm/s) but an effective porosity of 6%, (Hubbert & Willis, 1955).[8] In the Cat Canyon Oil Field and surrounding oil fields, the Monterey Formation is both the source rock as well as the producing reservoir rock. While core data has been taken in the Monterey, it is not considered representative of the total formation properties due to the localized natural fracturing, (Nelson, 2001). The data is included in **Appendix 4-I, Core Data and Well Histories, Core Data Summary Table,** for completeness.

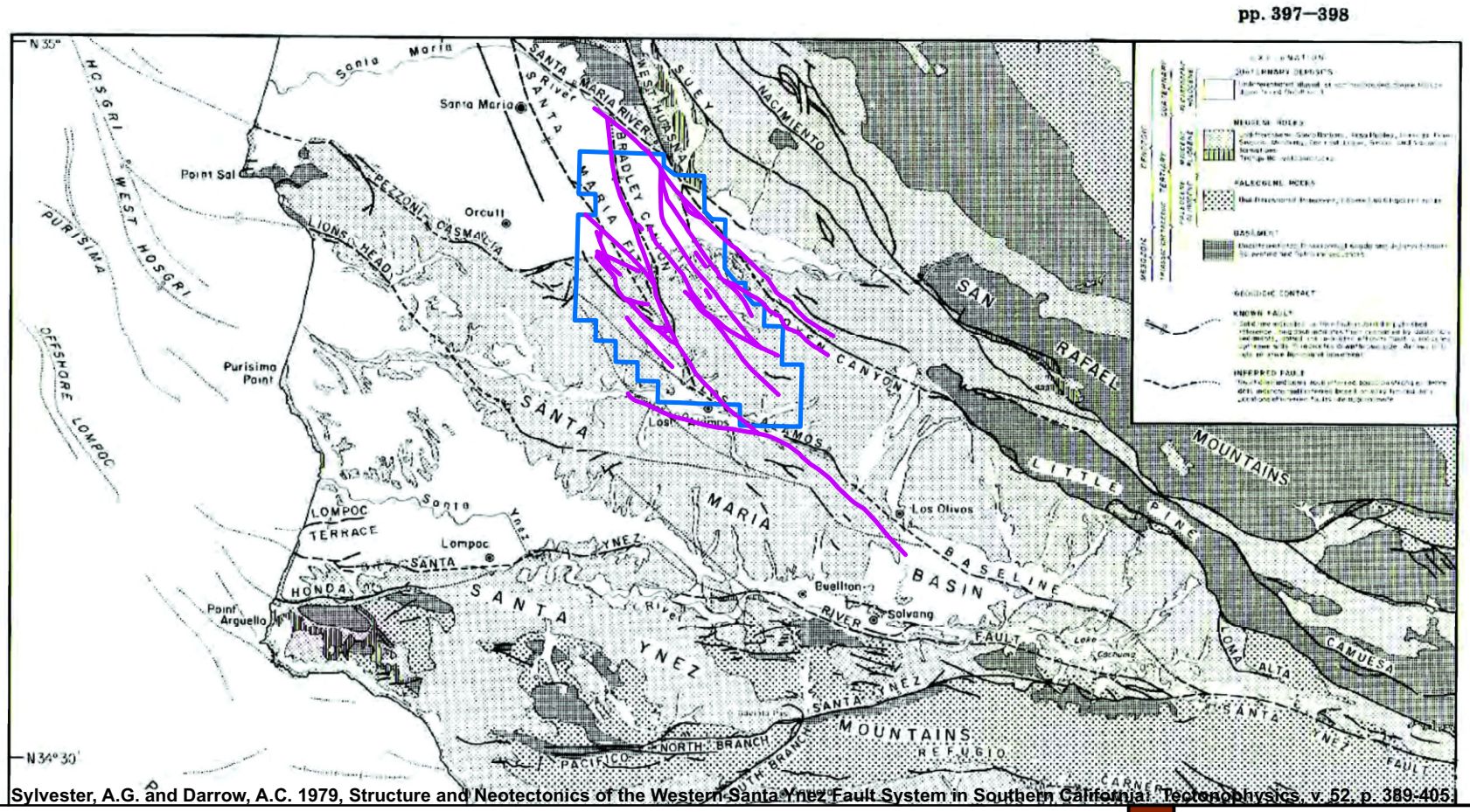
4.1.7 Point Sal Formation

The Point Sal Formation is marine deposit of middle Miocene age which conformably underlies the Monterey Formation. It consists of siltstone and diatomaceous siltstone with fine-grained sandstone and lenses of sandstone and conglomerate. The average thickness is 750 feet which provides the lower vertical confinement for the Monterey Formation**. Figure 4.1-1, Type Logs**, shows the Point Sal in its relationship to the Monterey. The permeability of the Point Sal is estimated as less than 1 millidarcy (8.4 X10-7 cm/s), (Freeze & Cherry, 1979).

[8] The high permeability accounts for the Monterey's ability to produce large volumes of heavy oil.

4.2 Regional Structure

The Cat Canyon Oil field and the Study Area for the proposed Aquifer Exemption Expansion is located in the eastern end of the Santa Maria Basin which extends to the offshore to the west, **Figure 4.2-1, Regional Structural Setting** (Sylvester, 1979)**.** The principal geographic features which define the basin are the San Rafael Mountains to the north and the Santa Ynes Mountains to the south. The northwest trending Sur-Nacimiento Fault lies along the boundary to the north and the east-west trending Santa Ynez fault is along the southern boundary.



Sylvester, A.G. and Darrow, A.C. 1979, Structure and Neotectonics of the Western Santa Ynez Fault System in Southern California. Tectonophysics, v. 52, p. 389-405.

Legend

- Monterey Faults
- Study Area

N
W E
S

8 4 0 8
Miles

WZI INC.
BAKERSFIELD, CALIFORNIA

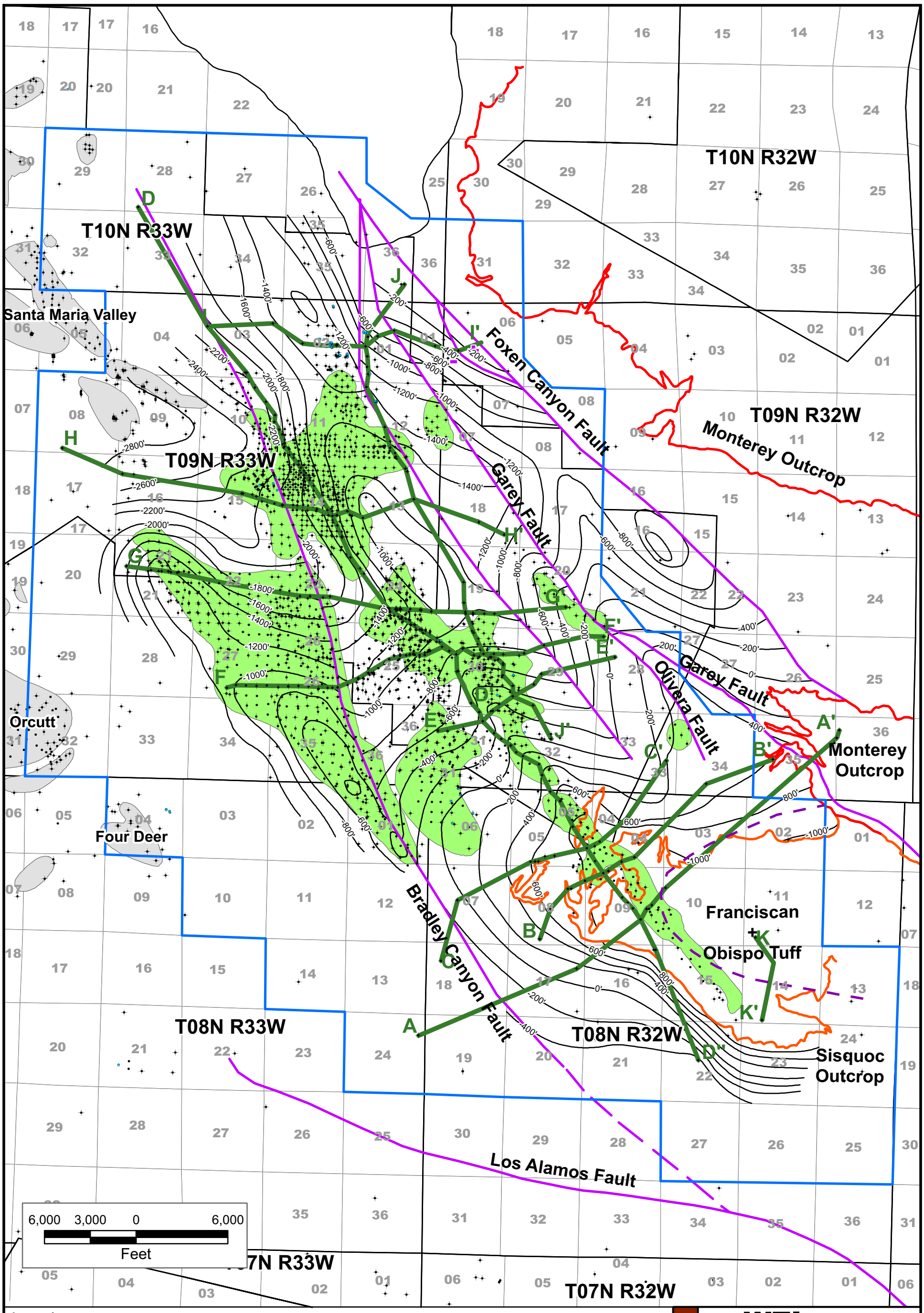
CAT CANYON AQUIFER EXEMPTION EXPANSION

REGIONAL STRUCTURAL SETTING FROM ART SYLVESTER MAP

DATE: 7/17		FIGURE: 4.2-1

The Cat Canyon Oil Field and the associated study area are bordered by the Foxen Canyon/Santa Maria River Fault system on the northwest and the Pezzoni/Los Alamos/Baseline Fault system on the southwest. The Foxen Canyon Fault and the Santa Maria River Fault segments are postulated to be part of the same fault system, **Figure 4.2-1, Regional Structural Setting**, as described by Hall, 1978 and Sylvester, 1979.

The Cat Canyon Oil Field structure is that of northwesterly to southeasterly trending homocline with a series of superimposed anticlines at depth, **Figure 4.1-2 Dibblee Surface Geology Map,** which is common in the regional structure. The western flanks plunge more steeply to the west than to the east. The major anticlines are the Gato Ridge Anticline, which forms the Gato Ridge Area and portions of the Eastern Area, and the Los Flores Anticline, which forms the Western Area. These folds trend to the northwest parallel to the regional faulting. The folding and faulting is more severe in the Miocene Formations than in the more recent sediments in the Pliocene and Pleistocene, **Figure 4.2-2 Top Sisquoc Structure Map**, **Figure 4.2-3, Top of Sisquoc S1b Structure Map, Figure 4.2-4, Top of Monterey Structure Map** and **Figure 4.2-5, Top of Point Sal Structure Map**. Structures in the Cat Canyon Oil Field are related to the late Miocene early Pliocene right lateral offset on the Foxen Canyon Fault and the Los Alamos fault systems. The related Los Olivos Fault, Garey Fault, and the Bradley Canyon Fault appear to join the Foxen Canyon/Santa Maria River fault system to the north. **Figure 4.2-6, Fault Map**, (Hickey, 1985**),** (Bradley & al, 1943). (Sylvester, 1979). The faults are generally characterized as steeply dipping faults which appear to offset the Upper Sisquoc**.** The mapped faults are both named and un-named based on the oil field nomenclature. The Los Flores fault is located on the east side of the Los Flores Anticline, providing the eastern limit of the West Area oil accumulation.



Legend

Well Status
- Active
- Buried
- Idle
- New
- Plugged
- Volcanics
- Study Area

- Cross Section
- Monterey Outcrop
- Sisquoc Outcrop
- Faults
- Top Sisquoc Structure Contours

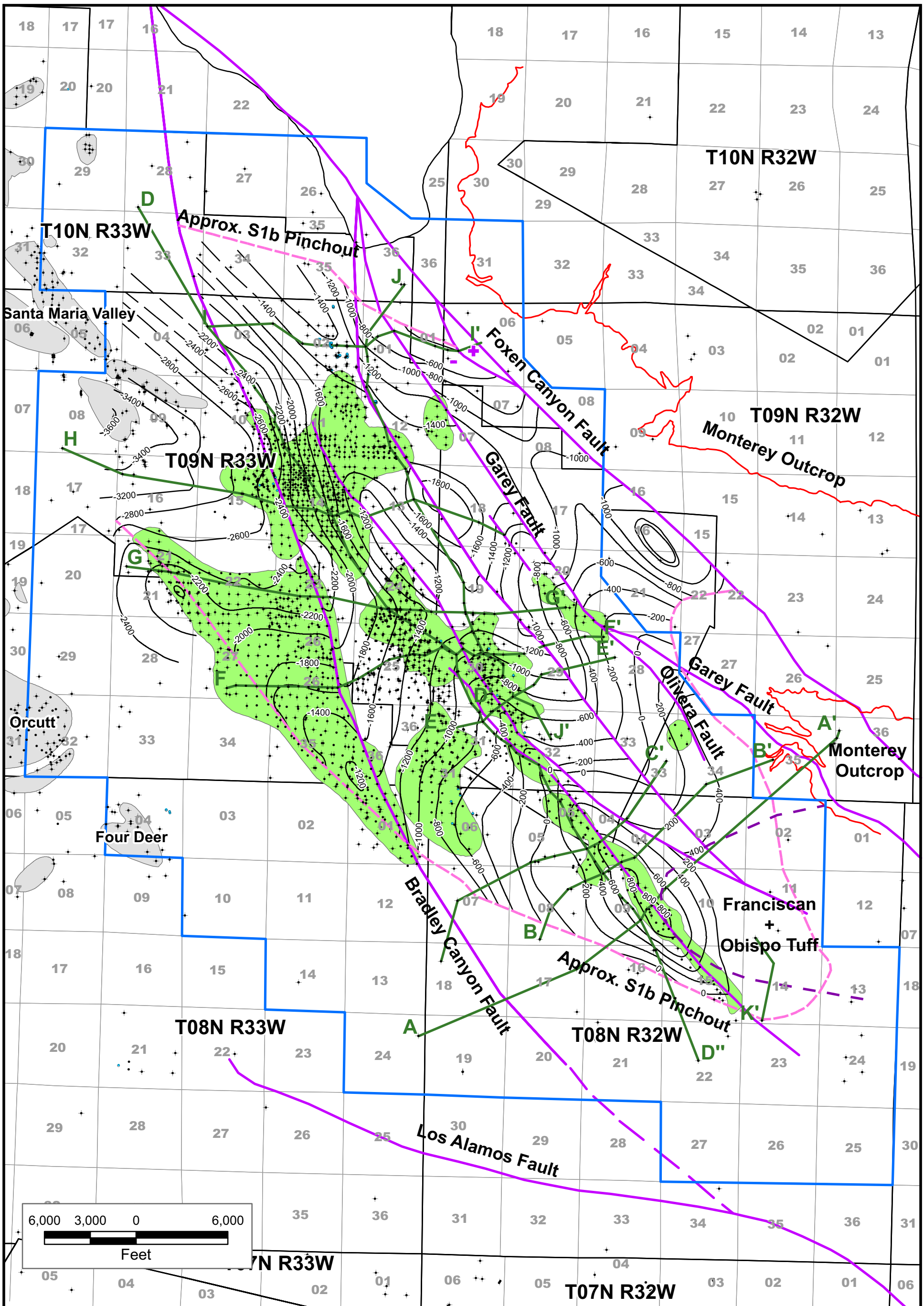
Fault Throw
- Down
- Up
- 1973-1974 Productive Boundary
- Other Oilfield

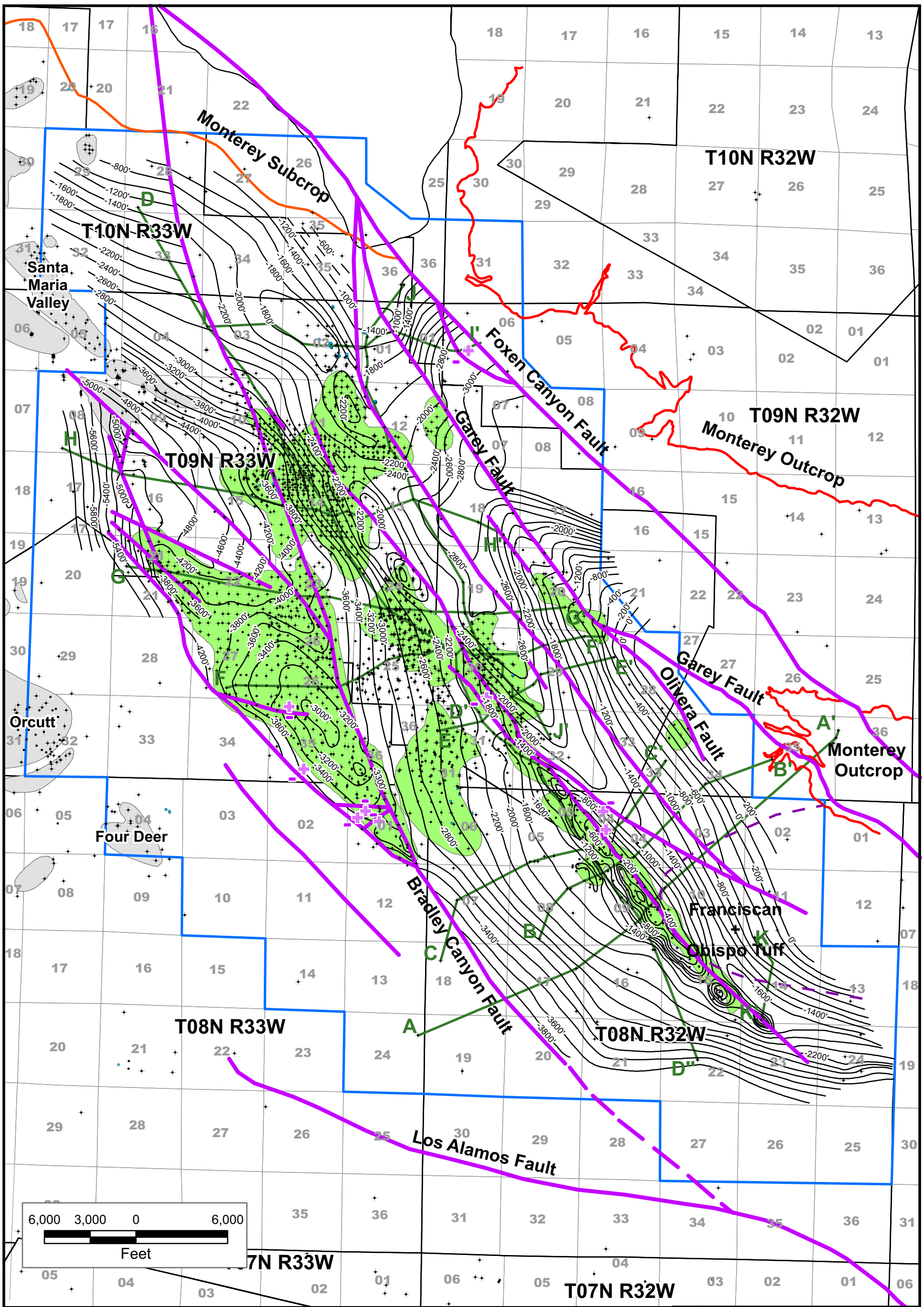
WZI INC.
BAKERSFIELD, CALIFORNIA

CAT CANYON AQUIFER EXEMPTION EXPANSION

TOP OF SISQUOC STRUCTURE MAP

DATE: 10/17 | FIGURE: 4.2-2


T10N R32W
T10N R33W
T09N R32W
T09N R33W
T08N R33W
T08N R32W
T07N R32W
Approx. S1b Pinchout
Santa Maria Valley
Foxen Canyon Fault
Garey Fault
Olivera Fault
Monterey Outcrop
Orcutt
Four Deer
Bradley Canyon Fault
Franciscan
+
Obispo Tuff
Los Alamos Fault
6,000 3,000 0 6,000
Feet
Legend
WellStatus
Active
Buried
Idle
New
Plugged
Study Area
Cross Sections
Monterey Outcrop
Approx. S1b Pinchout
Faults
Volcanics
S1b Structure Contour
Approx. S1b Structure Contour
Fault Throw
Down
Up
1973-1974 Productive Boundary
Other Oilfield
N
W
E
S
WZI INC.
BAKERSFIELD, CALIFORNIA
CAT CANYON AQUIFER
EXEMPTION EXPANSION
TOP OF SISQUOC 1b STRUCTURE MAP
DATE: 10/17
FIGURE: 4.2-3



Legend

Well Status
- Active
- Buried
- Idle
- New
- Plugged
- Faults
- Monterey Subcrop
- Volcanics
- Approx. Top Monterey Structure
- Top Monterey Structure
- Monterey Outcrop
- Cross Section
- Study Area

Fault Throw
- Down
- Up
- 1973-1974 Productive Boundary
- Other Oilfield

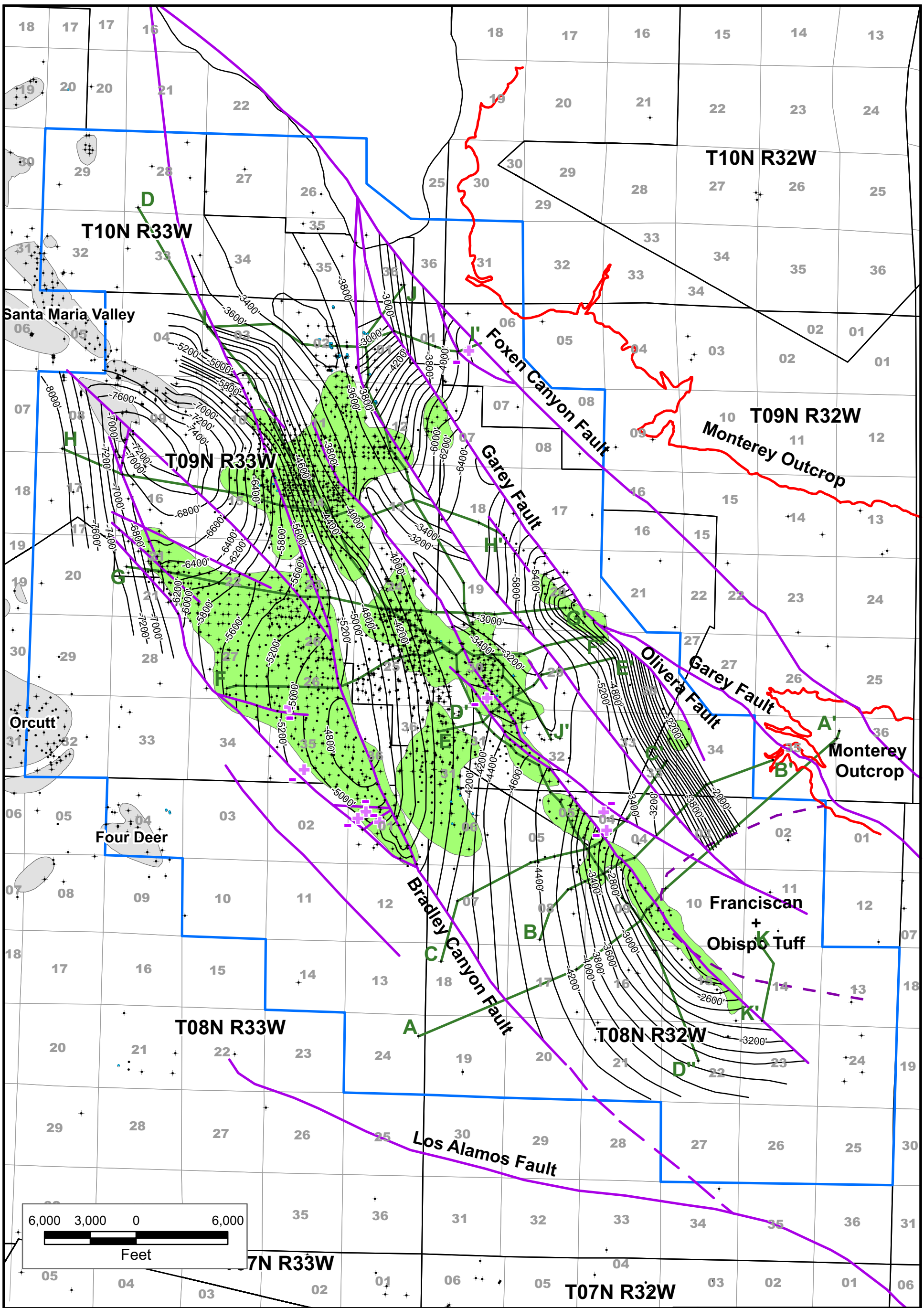
N W E S

WZI INC.
BAKERSFIELD, CALIFORNIA

CAT CANYON AQUIFER EXEMPTION EXPANSION

TOP OF MONTEREY STRUCTURE MAP

DATE: 10/17 | FIGURE: 4.2-4



Legend

Well Status
- Active
- Buried
- Idle
- New
- Plugged
- Faults
- Point Sal Structure Contours
- Point Sal Subcrop
- Monterey Outcrop
- Cross Section
- Study Area
- 1973-1974 Productive Boundary
- Other Oilfield

Fault Throw
- Down
- Up

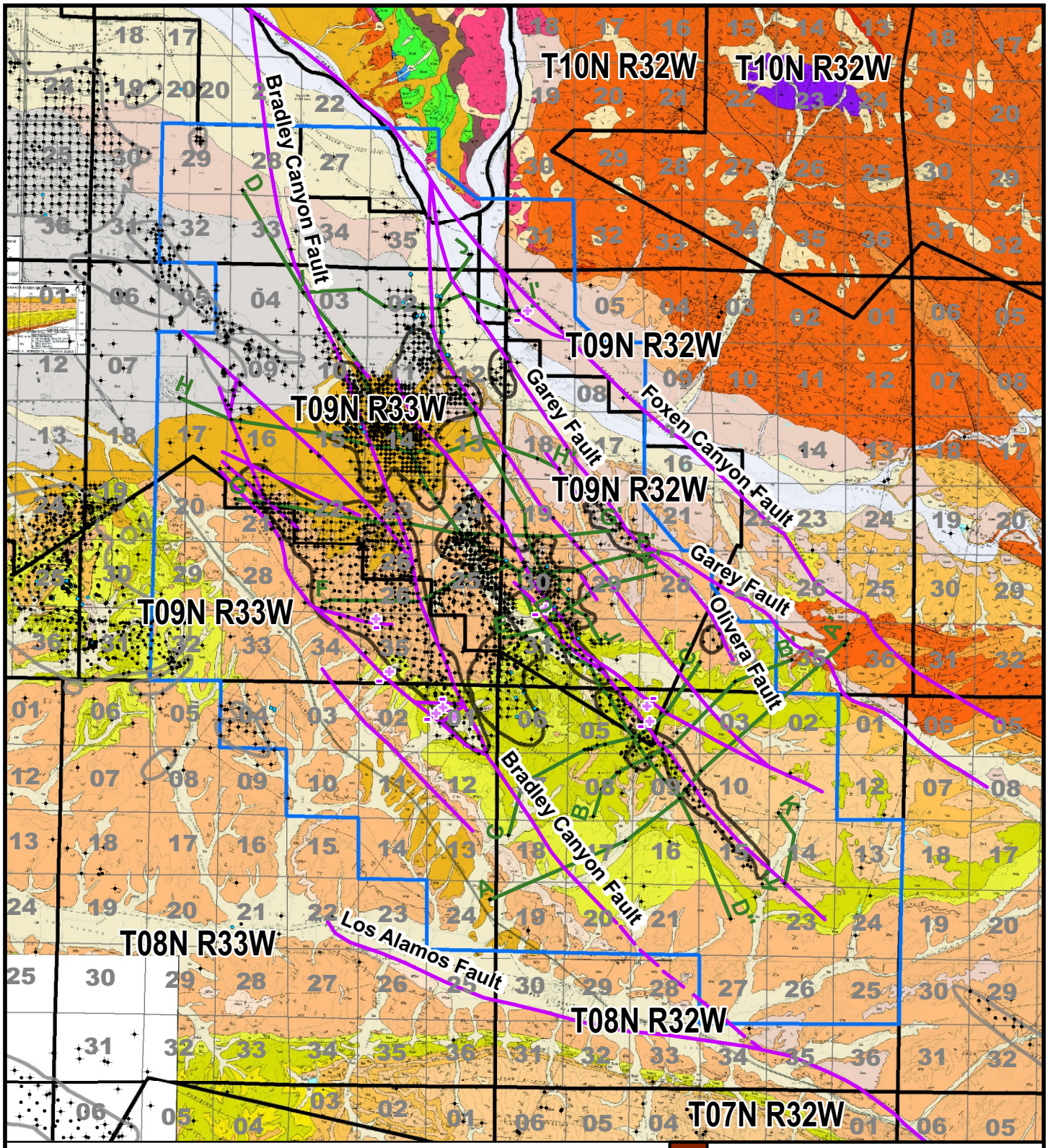
N W E S

WZI INC.
BAKERSFIELD, CALIFORNIA

CAT CANYON AQUIFER EXEMPTION EXPANSION

TOP OF POINT SAL STRUCTURE MAP

DATE: 10/17 | FIGURE: 4.2-5



Legend

WellStatus

- Active
- Buried
- Idle
- New
- Plugged

- Monterey Faults
- Cross Sections
- 1973-1974 Productive Boundary
- Other Oilfield
- Study Area

Fault Throw

- Down
- Up

N
W E
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Miles

WZI INC.
BAKERSFIELD, CALIFORNIA

CAT CANYON AQUIFER EXEMPTION EXPANSION

FAULT MAP

DATE: 10/17		FIGURE: 4.2-6

5 Regional Hydrogeologic Setting

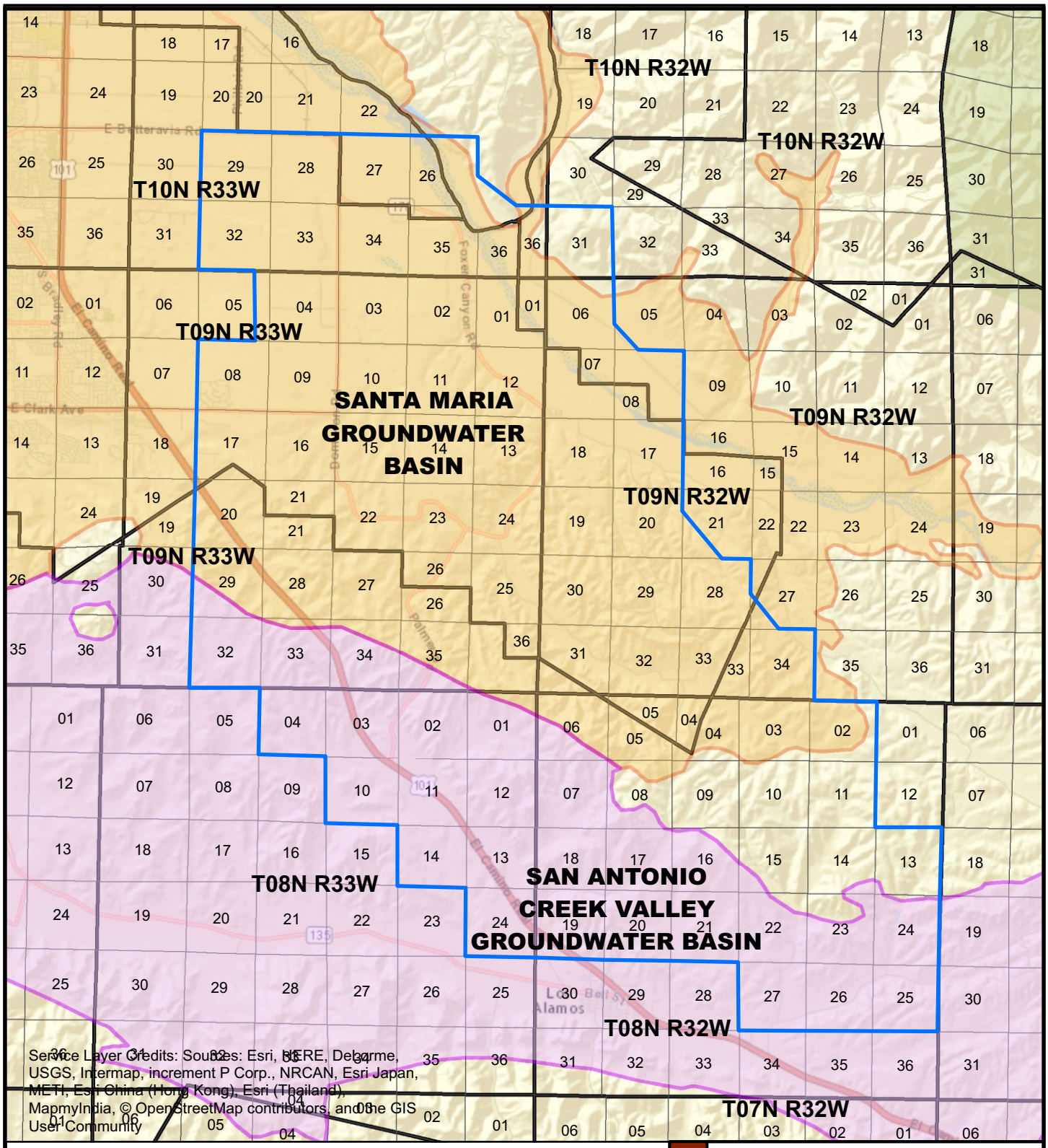
The study area is situated on the northern area of the San Antonio Groundwater Basin and the southern area of the Santa Maria Groundwater Basin as defined by the California Department of Water Resources, Figure **5.1-1, Hydrologic Basin Map.** Both basin areas have been studied for determination of groundwater availability, quality and management, (Martin, 1985), (Worts & Thomasson, 1951), (Muir, 1964), (Schadt, 2015), (Golden State Water Company, 2014), (Hutchinson, 1980), (California Department of Water Resources Board, 2004), (California Department of Water Resources Board, 2004). The county of Santa Barbara has studied the hydrogeology from a planning and land use perspective, (County S. B., 2013).

5.1 Hydrogeologic Setting

The basins settings are described in Department of Water Resources Bulletin 118, (California Department of Water Resources Board, 2004), (California Department of Water Resources Board, 2004). The San Antonio Groundwater Basin is located mid Santa Barbara County and is about 30 miles in length from east to west. Rock units surfacing at the west end of the basin force water to the surface creating Barka Slough and eliminating the possibility of salt water intrusion into the aquifer. The San Antonio Creek Valley Groundwater Basin is bounded on the north by the Casmalia Hills and the Solomon Hills, on the south by the Purisma Hills and Burton Mesa, and on the west by the Pacific Ocean. The valley is drained by San Antonio Creek. Vandenberg Air Force Base (VAFB) uses water from the San Antonio Basin in addition to its State Water allocation to meet the Base's water demand. The vast majority of water demand within the basin is from agriculture, a major component of which is viticulture. The basin supplies ranching operations and the urban water demand of the town of Los Alamos. The basin also supplies the urban water demand of Orcutt. Historic studies have indicated an overdraft of about 9,500 AFY in the basin.

The Santa Maria Groundwater Basin underlies the Santa Maria Valley in the coastal portion of northern Santa Barbara and southern San Luis Obispo Counties. The basin also underlies Nipomo and Tri-Cities Mesas, Arroyo Grande Plain, and Nipomo, Arroyo Grande and Pismo Creek Valleys, (County S. B., 2013). The basin is bounded on the north by the San Luis and Santa Lucia Ranges, on the east by the San Rafael Mountains, on the south by the Solomon Hills and the San Antonio Creek Valley Groundwater Basin, on the southwest by the Casmalia Hills, and on the west by the Pacific Ocean. Several rivers and creeks drain westward to the Pacific Ocean. The Santa Maria Valley is drained by the Sisquoc, Cuyama, and Santa Maria Rivers and Orcutt Creek. Tri-Cities Mesa and Arroyo Grande Plain are drained by Arroyo Grande and Pismo Creeks. Nipomo Valley is drained by Nipomo Creek into the Santa Maria River.

A more detailed discussion of the available supplies in the area is contained in **Appendix 6-1, Treatment Feasibility Study**.



Legend

- Study Area
- San Antonio Creek Valley GW Basin
- Santa Maria GW Basin

N
W E
S

2 1 0 2
Miles

WZI INC.
BAKERSFIELD, CALIFORNIA

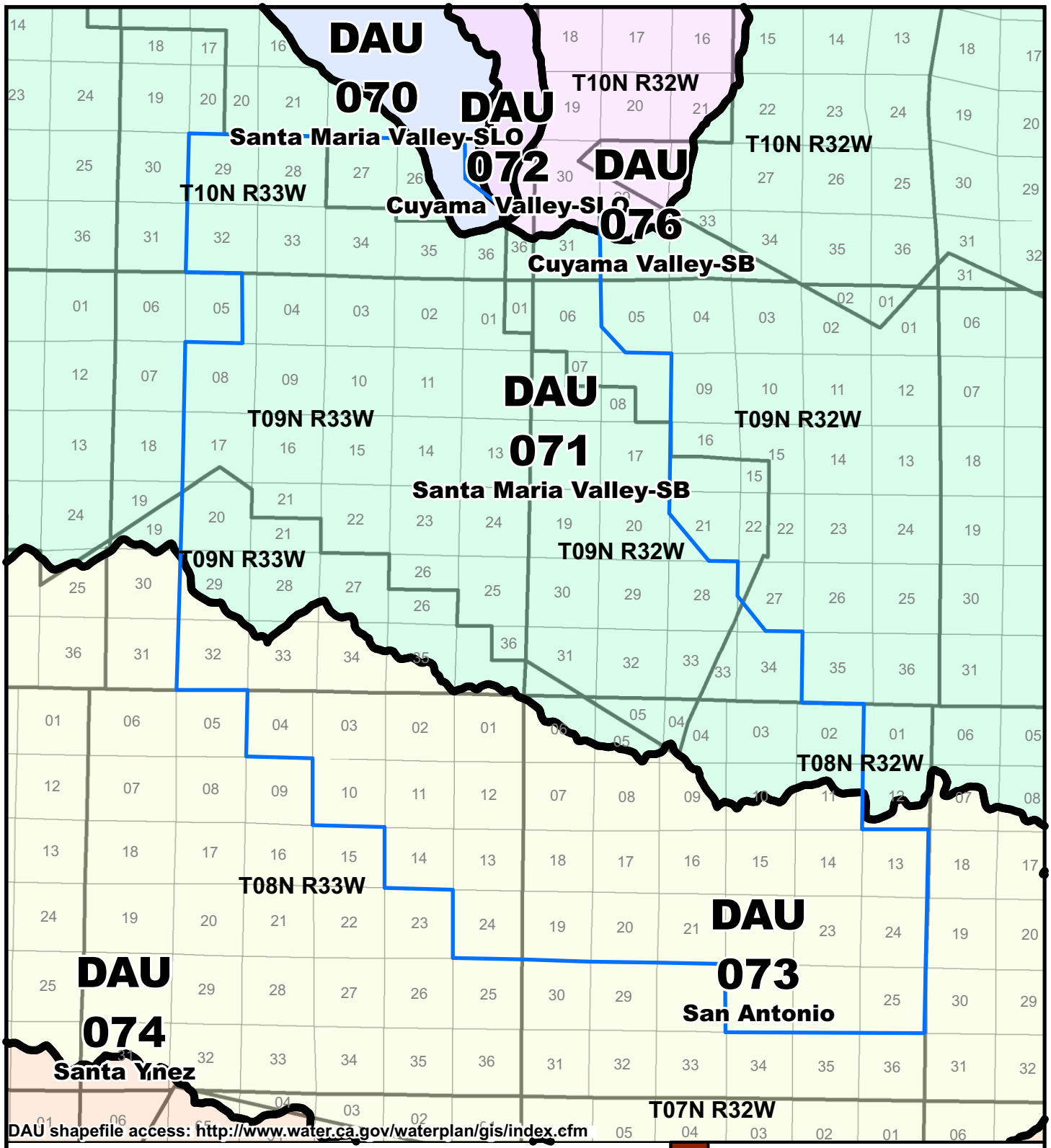
CAT CANYON AQUIFER EXEMPTION EXPANSION

HYDROGEOLOGIC BASIN MAP

DATE: 8/17		FIGURE: 5.1-1

Within the groundwater basins the Central Coast Regional Water Quality Control Board, (CCRWQCB), has defined that all groundwaters except those in the Soda Lake Subregion have beneficial uses of agricultural, domestic, municipal, and industrial. The beneficial uses for this basin defined by the CCRWQCB are municipal, agricultural and industrial, (Water Quality Control Board-CentraLCoast Region, 2016).

The study area is in portions of the Detailed Analysis Unit,(DAU) 70, 71, 72, 73, and 76, **Figure 5.1-2, Detailed Analysis Unit Map** as defined by the Department of Water Resources, (County S. B., 2013). While the southernmost tips of DAUs 70 and 72 extend no more than 1000 feet into the northern most the Study Area (which is extended to the section lines) geologically the two DUAs are in the "Fringe Areas" of the Santa Maria Basin. The fringes are largely in contact with DAU 71 and 76, respectively. They are otherwise isolated by the southern extent of Temettate Ridge, which projects into the Study Area at the point where the DAUs converge with DAU 71 and 76. These two isolated portions of DAUs which lie on the opposite side of the Sisquoc River Basin in San Luis Obispo County drain in to the Santa Maria Basin in DAU 71. Within the Study Area, the groundwater as described by Bulletin 118 occurs in the Alluvium, Paso Robles, and the Careaga. The groundwater is primarily unconfined and recharged by the surface runoff. DAU 76 a larger complete DAU has a small point of contact with the Study Area in the same manner as DAUs 70 and 72 however it is not defined as fringe and its information was considered in this application.



Legend

- Study Area

Detailed Unit Analysis Code

- 070
- 071
- 072
- 073
- 074
- 076

N W E S

2 1 0 2

Miles

WZI INC.

BAKERSFIELD, CALIFORNIA

CAT CANYON AQUIFER EXEMPTION EXPANSION

DETAILED ANALYSIS UNIT MAP

DATE: 8/17		FIGURE: 5.1-2

5.1.1 Water Wells/ Nearest Municipal Water Well

A search was conducted for water supply wells within at least one mile of the proposed Aquifer Exemption Expansion Area of the Cat Canyon Oil Field. The area of review extended beyond the specified Guidance Document 34 one mile buffer area to identify if any water supply wells were hydraulically connected with the potential exemption aquifers. Data on water supply wells were gathered from the Department of Water Resources, the County Of Santa Barbara and field inspection, **Tables 5.1-1(a-c), Water Well Inventory**. Although total depth and screened intervals are reported on some of the well completion reports, the official aquifer information is not included. Where the completion interval was known, the formation of the water well completion was designated by the professional geologist and placed on the water well inventory. Field inspection was conducted within the study area by contract personnel on behalf of the applicant. Any reports of the field verification are included in **Appendix 5-I, Oil Field Water Well Verification Reports**. The redacted water well completion reports are included to conform with requirements of DWR and the county of Santa Barbara to protect confidential information in **Appendix 5-II, Water Well Completion Reports**.[9] Additional regional water well data were identified and plotted, these data are found in **Appendix 5-III, Geologic Survey Water-Supply Paper 1000**, and **Geologic Survey Water-Supply Paper 1664,** (Worts & Thomasson, 1951)**,** (Muir, 1964)**.**

[9] The owner information has been redacted.

Table 5.1-1a: Water Wells Inside of Existing Boundary

Map Number	APN	SB Co Permit	DWR Ref.	Date Completed	TWN	RNGE	SEC	Total Depth (bgs feet)	Compl. Depth (bgs feet)	Depth of Static Water (bgs feet)	Screen Interval 1 (bgs feet)	Screen Interval 2 (bgs feet)	Screen Interval 3 (bgs feet)	Completed Formation	Formation TD	Purpose	Surface Seal (bgs feet)	Chemical Report	SS Depth of GW	Elevation (wells with water level)
CC056	101-030-007	101961		36858	9N	33W	22H01	680	680					Orcutt/Paso Robles/Careaga	Careaga	Domestic/Agricultural		No		
CC058	101-030-10	101388	741645	36814	9N	33W	22K	760	740	300				Orcutt/Paso Robles/Careaga	Careaga	Domestic		No	550	850
CC059	101-030-009	SR0109093		41608	9N	33W	23C	880	850	427				Orcutt/Paso Robles/Careaga	careaga	Irrigation		No	313	740
CC060	129-180-17	0103997		38650	9N	33W	23D01	940	900	367				Orcutt/Paso Robles/Careaga	Careaga	Irrigation		No	323	690
CC061	101-030-09	100343	521855	36186	9N	33W	23D02	1070	1070	432				Orcutt/Paso Robles/Careaga	Careaga	Irrigation		No	298	730
CC062	101-030-08	8654	316890	32932	9N	33W	23E	613	553	250				Orcutt/Paso Robles	Paso Robles	Domestic		Yes	520	770
CC064			105178	28062	9N	33W	25D02	515	515		380'-441'	441'-470'		Paso Robles/ Careaga	Careaga	Industrial Oil Field	0-50'	No		
CC110			106888	27912	9N	33W	11H	556	556					Older Gravels/Paso Robles/Careaga	Careaga	Industrial Oil Field		No		
CC115	129-201-01	3193	139095	30002	9N	33W	12J01	520	486					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC116	129-110-20	8608	337840	32974	9N	33W	12J02	281	275					Alluvium/Paso Robles	Paso Robles	Domestic/Irrigation		No		
CC117		1491		29152	9N	33W	12N	600	600	410				Older Gravels/Paso Robles/Careaga	Careaga	Industrial Oil Field		No	315	725
CC121				26737	9N	33W	14F	850	850					Orcutt/Paso Robles/Careaga	Careaga	Industrial Oil Field		No		
CC183	101-070-004	SR0105007		39275	9N	32W	31F	260	260	60	140'-260'			Careaga/Foxen	Foxen	Domestic	0-50'	No	630	690
CC189				18470	9N	32W	32L	210	210					Careaga	Careaga	Industrial Oil Field		No		
CC190	101-070-060	SR107461		40445	9N	32W	32P	105	100	43	70'-90'			Alluvium/ Careaga	Careaga	Domestic/ Irrigation	0-25'	No	717	760

Table 5.1-1b: Water Wells Inside of Proposed Expansion Boundary

Map Number	APN	SB Co Permit	DWR Ref.	Date Completed	TWN	RNGE	SEC	Total Depth (bgs feet)	Compl. Depth (bgs feet)	Depth of Static Water (bgs feet)	Screen Interval 1 (bgs feet)	Screen Interval 2 (bgs feet)	Screen Interval 3 (bgs feet)	Completed Formation	Formation TD	Purpose	Surface Seal (bgs feet)	Chemical Report	SS Depth of GW	Elevation (wells with water level)
CC012	129-020-032	WP368		42030	10N	33W	34E1	650	650					Loess/Paso Robles/Careaga	Careaga	Irrigation		No		
CC013	129-020-032	WP1389		42541	10N	33W	34E2	700	700					Loess/Paso Robles/Careaga	Careaga	Irrigation		No		
CC015	129-020-05	9165	352724	33365	10N	33W	34G2	720	690					Surface Sed/Paso Robles/Careaga	Careaga	Irrigation		No		
CC016	129-020-31	116		34185	10N	33W	34K	670	670					Surface Sed/Paso Robles/Careaga	Careaga	Irrigation		No		
CC017	129-020-008	7646	316896	32688	10N	33W	34N1	575	575	220				Alluvium/Paso Robles	Paso Robles	Irrigation		No	190	410
CC018	129-020-08	8847		33399	10N	33W	34N2	650	650					Alluvium/Paso Robles	Paso Robles	Domestic		Yes		
CC019	129-020-08	8851	316870	33267	10N	33W	34N3	410	410	253				Alluvium/Paso Robles	Paso Robles	Domestic		No	157	410
CC025	129-040-009	SR0102972	792453	37995	10N	33W	35M	520	520					Paso Robles/ Careaga	Careaga	Irrigation		No		
CC026	129-040-008	SR0109549		41908	10N	33W	35Q1	588	580					Paso Robles/Careaga	Careaga	Irrigation		No		
CC027			61627	26793	10N	33W	35Q2	630	600					Paso Robles/Careaga	Careaga	irrigation		No		
CC028			39498	25099	10N	33W	35R1	275	275					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC029	129-080-02	8646		33293	10N	33W	35R2	300	300					Alluvium/Paso Robles	Paso Robles	Domestic		No		
CC041	129-100-11	7401	276939	32380	9N	33W	1L	225	223					Alluvium/Paso Robles	Paso Robles	Domestic/ Irrigation	0-50'	No		
CC042	129-100-23	SR0105118	1098073	39352	9N	33W	1M	440	440	140				Alluvium/Paso Robles	Paso Robles	Irrigation		No	270	410
CC043	129-100-023	SR0107592	1082579	40502	9N	33W	1P		260					Alluvium/Paso Robles	Paso Robles	Destroyed		No		
CC044		2021	64919	28885	9N	33W	1Q	195	195					Alluvium/Paso Robles	Paso Robles	Industrial Oil Field		No		
CC057	101-030-007	104585	907276	39401	9N	33W	22H02	905	905	447				Orcutt/Paso Robles/Careaga	Careaga	Irrigation		No	293	740
CC063				27682	9N	33W	25D01	758	758					Paso Robles/Careaga	Careaga	Industrial Oil Field		No		
CC065	129-080-06	300	82387	28017	9N	33W	2A1	269	269					Alluvium/Paso Robles	Paso Robles	Domestic		No		
CC066	129-080-002	SR0102354		37329	9N	33W	2A2							No Depth	No Depth	Domestic		Yes		
CC069	129-090-31	3362	139219	30974	9N	33W	2H01	330	302					Paso Robles	Paso Robles	Domestic		No		
CC070	129-090-035	9139	316880	33083	9N	33W	2H02	304	304					Alluvium/Paso Robles	Paso Robles	Domestic		No		
CC071	129-090-040	SR0105807		39722	9N	33W	2H03	290	290					Alluvium/Paso Robles	Paso Robles	Doemstic		No		
CC072	129-090-27	8935		33714	9N	33W	2H04	318	318					Alluvium/Paso Robles	Paso Robles	Domestic		No		
CC073	129-090-037	SR0106942		40207	9N	33W	2H05	350	342	176				Paso Robles	Paso Robles	Domestic/Irrigation		No	214	390
CC074	129-100-017	SR0107629	1082582	40575	9N	33W	2K	665	650	304				Loess/Paso Robles	Paso Robles	Industrial Oil Field		yes	196	500
CC075	129-100-32	101467	538842	36620	9N	33W	2N	1142	1090					Loess/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No		
CC076			105180	28153	9N	33W	2Q	624	624					Loess/ Paso Robles	Paso Robles	Industrial Oil Field		Yes		
CC078	129-02-30	8932	316871	33567	9N	33W	3J	810	650					Loess/Paso Robles	Paso Robles	Irrigation		No		
CC081	129-020-30	0103364		38275	9N	33W	3R	860	850	320				Loess/Paso Robles	Paso Robles	Irrigation		No	223	543
CC111	129-180-010	SR107436	1082576	40447	9N	33W	12A	540	470	148				Alluvium/Paso Robles/Careaga	Careaga	irrigation		No	252	400
CC112	129-180-10	13360	171363	31110	9N	33W	12C01	520	500					Paso Robles/Careaga	Careaga	Irrigation		No		
CC113	129-100-008	WP0000917		42614	9N	33W	12C02	659	620	208				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	197	405
CC114	129-180-009	SR107616	1082584	40596	9N	33W	12F	608	500	100				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No		100
CC118	129-190-01	101202		36518	9N	33W	12R01	900	900					Alluvium/Paso Robles/Careaga	Careaga	Domestic		No		
CC120	129-110-20	8590	337841	32982	9N	33W	12R03	663	640					Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No		
CC147	129-201-033	SR0102888	757854	37841	9N	32W	7N02							Destroyed - No Depth	Destroyed - No Depth	Destroyed		No		
CC148	129-110-19	8846	316868	33287	9N	32W	7P	505	505					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC154	129-210-001	568	478203	35614	9N	32W	18D	372	220					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC185	101-070-050	104144		38727	9N	32W	32A02	500	450	325	300-340	340-440		Paso Robles/ Careaga	Careaga	Domestic		No	575	900
CC186	101-70-069	0104353	E039478	38877	9N	32W	32J1	140	140	45	60-140			Alluvium/ Careaga	Careaga	Domestic	0-52'	No	705	750
CC187	101-70-069	0104136	E039477	38875	9N	32W	32J2	140	140'	45	60'-140'			Alluvium/ Careaga	Careaga	Domestic	0-52'	No	698	743
CC188	100-070-066	101600	765360	36644	9N	32W	32J3	155	147'		23'-147'			Alluvium/ Careaga	Careaga	Domestic	0-23'	No		
CC191	101-070-49	102151		37061	9N	32W	33C	265	265					Careaga	Careaga	Domestic		No		
CC192	101-070-046	8958		33487	9N	32W	33D	440	400	370	240'-440'			Paso Robles/ Careaga	Careaga	Domestic	0-50'	No	620	990
CC194	101-070-53	460		35145	9N	32W	33K	100	100					Alluvium/Careaga	Careaga	Domestic		No		
CC195	101-070-26	23		34182	9N	32W	33L	150	150					Alluvium/Careaga	Careaga	Domestic		Yes		
CC196	101-070-71	104850		39574	9N	32W	33N04	114	114		54'-114'			Careaga	Careaga	N/A	0-30'	No		
CC197	101-070-071	SR106697		40066	9N	32W	33P1	420	420	40	80'-140'	240'-280'	380'-420'	Careaga/Foxen/ Sisquoc	Sisquoc	Domestic/ Irrigation	0-40'	No	730	770
CC198	NA	NA		38534	9N	32W	33P2	100	97		57'-97'			Alluvium/ Careaga	Careaga	Domestic/ Irrigation	0-34'	No		

Table 5.1-1c: Water Wells Outside of Boundary

Map Number	APN	SB Co.Permit	DWR Ref.	Date Completed	TWN	RNGE	SEC	Total Depth (bgs feet)	Compl. Depth (bgs feet)	Depth of Static Water (bgs feet)	Screen Interval 1 (bgs feet)	Screen Interval 2 (bgs feet)	Screen Interval 3 (bgs feet)	Completed Formation	Formation TD	Purpose	Surface Seal (bgs feet)	Chemical Report	SS Depth of GW	Elevation (wells with water level)
CC001	129-030-012	SR107627	1090201	1/13/2011	10N	33W	26P1	220	220	33				Alluvium/Paso Robles	Paso Robles	Irrigation		No	317	350
CC002	129-030-012	SR0107674			10N	33W	26P2	205	194	54	34-194			Alluvium/Paso Robles	Paso Robles	Irrigation		No	296	350
CC003	128-101-07	604		11/6/1997	10N	33W	27D	260	260					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC004	128-101-15	8817	316858	10/23/1990	10N	33W	27N1	610	600	150				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	188	338
CC005	128-101-015	SR0107534	1082578	12/30/2010	10N	33W	27N2	601	556	200				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	137	337
CC006		1482		42604	10N	33W	27R	120?	120?					Destroyed - No depth	Paso Robles	Destroyed		No		
CC007	128-100-027	SR0102511	792430	8/29/2002	10N	33W	28R	473	450	195	220-440			Qoa/Paso Robles/Careaga	Careaga	Domestic/Irrigation		Yes	175	370
CC008	129-020-038	SR0105925		39814	10N	33W	33E							Alteration of existing well - No depth	Alteration of existing well - No depth	Domestic		No		
CC009			139063	6/4/1981	10N	33W	33Q1	485	478	265				Loess/Paso Robles	Paso Robles	Domestic/ Irrigation	0-55'	No	180	445
CC010			38144	10/11/1973	10N	33W	33Q2	476	476	287				Loess/Paso Robles	Paso Robles	Irrigation		No	158	445
CC011	129-020-027		1090206	11/12/2010	10N	33W	33R	400	400	220				Loess/Paso Robles	Paso Robles	Domestic		No	170	390
CC014	129-020-005	WP1733		11/29/2016	10N	33W	34G1	525	525					Surface Sed/Paso Robles/Careaga	Careaga	N/A		No		
CC020	129-030-03	7536	335764	11/22/1989	10N	33W	35A	504	470					Paso Robles/Careaga	Careaga	Irrigation		no		
CC021	129-030-012	SR0107610	1090205	12/14/2010	10N	33W	35B1	240	230	93				Alluvium/Paso Robles	Alluvium/Paso Robles	Irrigation		No	260	353
CC022	129-030-012	SR107699		2/26/2011	10N	33W	35B2	200	200					Alluvium/Paso Robles	Alluvium/Paso Robles	N/A		No		
CC023	129-040-001	8036	441262	5/29/1996	10N	33W	35C	360	350	96				Alluvium/Paso Robles	Alluvium/Paso Robles	Domestic		No	269	365
CC024	129-040-009	SR0103059	792452	11/25/2003	10N	33W	35F	540	540					Paso Robles/Careaga	Paso Robles/Careaga	Irrigation		No		
CC030				11/20/1973	10N	33W	36G	122	122					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC031	129-050-12	SR100375/527	521849	12/31/1998	10N	33W	36H	109	105	12				Alluvium/Paso Robles	Paso Robles	Irrigation/Destroyed		Yes	388	400
CC032	Intentionally left blank																			
CC033	129-040-010	WP1567		11/28/2016	10N	33W	36Q1	600	650	86				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	284	370
CC034			61616	11/1/1972	10N	33W	36Q2	820	720					Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No		
CC035	129-050-12	5559	182650	3/11/1988	10N	33W	36Q3	560	540					Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No		
CC036	129-050-012	0000337/378	E0254985	2/4/2015	10N	33W	36Q05	460	460	101				Alluvium/Paso Robles/Careaga	Careaga	Domestic/Irrigation/Destroyed		No	287	388
CC037	129-110-02	8849	316867	4/22/1991	9N	33W	1B	160	160					Alluvium/Paso Robles	Paso Robles	Domestic		No		
CC038	129-110-01	5577	182663	5/17/1988	9N	33W	1G	474	470					Alluvium/Paso Robles/Careaga	Careaga	Domestic	0-50'	No		
CC039	129-110-002	WP0000381		6/5/2015	9N	33W	1H	650	640	139				Alluvium/Paso Robles	Paso Robles	Irrigation		No	271	410
CC040	129-110-01	8879	352748	10/7/1991	9N	33W	1J	698	660					Paso Robles/Careaga	Careaga	Irrigation		No		
CC045	101-020-013	0105164	E57344	39345	9N	33W	20D01	700						Alluvium/Paso Robles/Careaga	Careaga	Destroyed		No		
CC046	101-020-013	SR0104928	E047439	39189	9N	33W	20D02	760						Alluvium/Paso Robles/Careaga	Careaga	Destroyed		No		
CC047	101-060-069	105167	E057358		9N	33W	20D03	620						Alluvium/Paso Robles/Careaga	Careaga	Destroyed		39372		
CC048	101-020-013	105165		9/17/2007	9N	33W	20G	800	770	200				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	520	720
CC049	101-020-013	105215		10/12/2007	9N	33W	20K	680	800	390				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	350	740
CC050	101-020-013	105166		9/29/2007	9N	33W	20Q	700	650	200				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	545	745
CC051	101-030-019	105088		8/3/2007	9N	33W	22B	760	740	400				Orcutt/Paso Robles/Careaga	Careaga	Domestic		No	295	695
CC052	101-030-019	9117		4/28/1992	9N	33W	22C	1000	1000					Orcutt/Paso Robles/Careaga	Careaga	Agricutural		No		
CC053	129-170-11	1654		6/22/1979	9N	33W	22D01	700	700					Paso Robles/Careaga	Careaga	Domestic		No		
CC054	101-030-04	100431	812773	7/14/2000	9N	33W	22D02	765	750	490				Paso Robles/Careaga	Careaga	Domestic/Irrigation		Yes	330	820
CC055	129-170-011	101693		6/15/2000	9N	33W	22D03	800	780					Paso Robles/Careaga	careaga	N/A		No		
CC067	129-090-003	8669	316885	6/28/1990	9N	33W	2A3	304	304					Alluvium/Paso Robles	Paso Robles	Domestic		No		
CC068	129-090-02	SR0103563		8/8/2005	9N	33W	2A4	310	305	83				Alluvium/Paso Robles	Paso Robles	Domestic		No	302	385
CC077	101-060-002	SR0101877	741641	9/7/2000	9N	33W	34E	440	420	100				Alluvium/Paso Robles/Careaga	Careaga	Domestic		No	860	960
CC079	129-020-12	9002	459941	10/3/1994	9N	33W	3N01	640	640	270				Loess/Paso Robles	Paso Robles	Irrigation		No	235	505
CC080	129-020-12	7513	256005	6/1/1989	9N	33W	3N02	750	740					Paso Robles/Careaga	Careaga	Irrigation	0-50'	No		
CC082	129-020-43	SR0109580	0962172		9N	33W	4A01	800	750					Loess/Paso Robles	Paso Robles	Irrigation		No		
CC083	129-020-048	SR0104840	1098076	3/30/2007	9N	33W	4A02	590	562	280				Loess/Paso Robles	Paso Robles	Irrigaton		No	180	460
CC084		SR15692		3/4/2013	9N	33W	4C	1018	1000	327				Loess/Paso Robles	Paso Robles	Irrigation		No	111	438
CC085	129-010-011	SR0108730		2/22/2013	9N	33W	4D	1000	1000					Loess/Paso Robles	Paso Robles	N/A		No		
CC086	129-020-053	SR0105857	1082623	11/15/2008	9N	33W	4G	510	410	230				Loess/Paso Robles	Paso Robles	Domestic		No	250	480
CC087	129-020-45	105836	1098063	10/26/2008	9N	33W	4H	615	580	313				Loess/Paso Robles	Paso Robles	Domestic/Irrigation		No	167	480
CC088	129-020-054	SR0105564	1082580	11/10/2008	9N	33W	4J01	620	602	305				Loess/Paso Robles	Paso Robles	Irrigation		No	195	500
CC089	129-020-059	SR0106722	1082595	9/30/2009	9N	33W	4J02	620	601	352				Loess/Paso Robles	Paso Robles	Irrigation		No	158	510
CC090	129-020-066	SR0105468	1098059	6/15/2008	9N	33W	4K01	610	595	314				Loess/Paso Robles	Paso Robles	Domestic/Irrigation		Yes	176	490
CC091	129-020-060		1098060	7/24/2008	9N	33W	4K02	610	600	341				Loess/Paso Robles	Paso Robles	Domestic		Yes	170	511
CC092	129-020-067	0001188		5/27/2016	9N	33W	4L01	610	600	388				Loess/Paso Robles	Paso Robles	Irrigation		No	122	510
CC093	129-020-068	108023	1083182	10/4/2011	9N	33W	4L02	720	700	470				Loess/Paso Robles	Paso Robles	Domestic/Irrigation		No	100	570
CC094	129-010-11	8934		7/25/1991	9N	33W	5D	800	800					Loess/Paso Robles/Careaga	Careaga	Irrigation		No		
CC095		5269	153028	2/6/1986	9N	33W	8G	1040	1010					Loess/Paso Robles/Careaga	Careaga	Domestic		No		
CC096	129-120-010	SR0107896	E0133185	40730	9N	33W	8K	1051						Loess/Paso Robles	Paso Robles	Destroyed		No		
CC097	129-120-010	107707		6/1/2011	9N	33W	8L	1310	1150	595				Loess/Paso Robles/Careaga	Careaga	Public		No	95	690
CC098	129-146-012	SR0109484	E0240398	41843	9N	33W	8P2							Destroyed - No depth	Destroyed - No depth	Destroyed		No		
CC099	129-120-016	105778	1098065	11/15/2008	9N	33W	8Q01	930	900	608				Loess/Paso Robles	Paso Robles	Irrigation		No	127	735
CC100	129-120-16	SR0103306		8/2/2004	9N	33W	8Q02	1020	1020	600				Loess/Paso Robles	Paso Robles	Irrigation		No	160	760
CC101	129-120-026			12/9/2009	9N	33W	8R	1400	1380	528				Loess/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No	237	765
CC102			154549	3/6/1985	9N	33W	9C	1180	1170					Loess/Paso Robles	Paso Robles	Irrigation	0-50'	No		
CC103	129-170-002	SR108214	1083199	2/9/2012	9N	33W	9H01	700	700					Loess/Paso Robles	Paso robles	Irrigation		No		
CC104	129-170-002	SR0102890		9/5/2003	9N	33W	9H02	603	603					Loess/Paso Robles	Paso Robles	N/A		No		
CC105		SR0108599		12/15/2012	9N	33W	9N	1018	970	555				Loess/Paso Robles	Paso Robles	Irrigation		No	180	735
CC106	129-170-004	425		9/12/1995	9N	33W	9P	860	860					Loess/Paso Robles	Paso Robles	N/A		No		
CC107	129-170-06	5276	222854	8/14/1986	9N	33W	10C	504	502					Alluvium/Paso Robles	Paso Robles	Domestic/ Irrigation	0-50'	No		

Table 5.1-1c: Water Wells Outside of Boundary

Map Number	APN	SB Co.Permit	DWR Ref.	Date Completed	TWN	RNGE	SEC	Total Depth (bgs feet)	Compl. Depth (bgs feet)	Depth of Static Water (bgs feet)	Screen Interval 1 (bgs feet)	Screen Interval 2 (bgs feet)	Screen Interval 3 (bgs feet)	Completed Formation	Formation TD	Purpose	Surface Seal (bgs feet)	Chemical Report	SS Depth of GW	Elevation (wells with water level)
CC108	129-170-06	553	575188	9/25/1997	9N	33W	10D	800	750					Loess/Paso Robles/Careaga	Careaga	Irrigation		No		
CC109	129-170-06	528	478064	5/10/1997	9N	33W	10M	890	880					Alluvium/Orcutt/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No		
CC119	129-190-007	SR0108572		1/25/2013	9N	33W	12R02	700	690	139				Alluvium/Paso Robles/Careaga	Careaga	Public		No	361	500
CC122	129-170-10	103648		5/5/2005	9N	33W	15D01	825	810	374				Orcutt/Paso Robles	Paso Robles	Irrigation		No	196	570
CC123	129-170-100	SR0109466		7/24/2014	9N	33W	15D02	810	810	470				Orcutt/Paso Robles	Paso Robles	Irrigation		No	125	595
CC124	129-170-13	5513/541458	194037	5/19/1987	9N	33W	16C01	1200	1195					Orcutt/Paso Robles/Careaga	Careaga	Irrigation/Destroyed		No		
CC125	129-170-13	100583	521870	9/29/1999	9N	33W	16C02	1160	1156	493				Orcutt/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No	227	720
CC126	129-170-13			4/28/1978	9N	33W	16C03	1245	1245					Orcutt/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No		
CC127		SR0102095	710821	5/16/2001	9N	33W	16C04	1002	1000	584				Orcutt/Paso Robles	Paso Robles	Domestic/Irrigation		No	136	720
CC128	129-170-14	654	700833	4/30/1998	9N	33W	16D	1250	1200					Orcutt/Paso Robles/Careaga	Careaga	Irrigation		No		
CC129	129-150-43	525	478045	3/15/1997	9N	33W	17A01	1388	1370					Loess/Paso Robles/Careaga	Careaga	Irrigation		No		
CC130	129-151-048	SR0106339	1090222	5/11/2009	9N	33W	17A02	1000	970	682				Loess/Paso Robles/Careaga	Careaga	Irrigation		No	158	840
CC131	129-170-014	0104043		11/17/2005	9N	33W	17B	1220	1180	642				Loess/Paso Robles/Careaga	Careaga	Irrigation		No	163	805
CC132	129-151-056	SR0103140		4/12/2004	9N	33W	17E	690	690					Ocutt/Paso Robles	Paso Robles	N/A		Yes		
CC133	129-151-54	4086			9N	33W	17F	600	600					Orcutt/Paso Robles	Paso Robles	Domestic		No		
CC134	129-151-043	0103113		6/9/2004	9N	33W	17H	1000	830	701				Orcutt/Paso Robles	Paso Robles	Domestic/Irrigation		No	179	880
CC135	129-151-036	SR0104221	1085537	3/14/2006	9N	33W	17M	1000	1000					Orcutt/Paso Robles/Careaga	Careaga	Irrigation		No		
CC136	129-160-030	SR0102397		3/18/2002	9N	33W	17N01	800	800					Orcutt/Paso Robles	Paso Robles	N/A		No		
CC137	129-160-030	100809	715630	3/16/2002	9N	33W	17N02	820	800	607				Orcutt/Paso Robles	Paso Robles	Public		No	113	720
CC138	129-160-003	SR0104333	1098086	5/13/2006	9N	33W	17N03	810	800	590				Orcutt/Paso Robles	Paso Robles	Domestic/Irrigation		No	130	720
CC139	129-160-33	SR0102364		2/26/2002	9N	33W	17N04	700	700					Orcutt/Paso Robles	Paso Robles	N/A		Yes		
CC140	129-050-012	WP0000250		2/18/2015	9N	32W	5M	1100						Alluvium/Paso Robles/Monterey	Monterey	irrigation		No		
CC141			77813	2/2/1972	9N	32W	5R	816	600					Alluvium/Paso Robles/Monterey	Monterey	Irrigation		Yes		
CC142	129-050-12	9001	352769		9N	32W	6D							Destroyed - No depth	Destroyed - No depth	Destroyed		33681		
CC143	129-050-12	WP0000249		42047	9N	32W	6F	1100						Alluvium/Paso Robles/Monterey	Monterey	Destroyed		No		
CC144	129-003-05	8666	316888	4/25/1990	9N	32W	6P	550	550					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC145	129-110-07	8594	351533	12/10/1990	9N	32W	7G	758	530					Alluvium/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No		
CC146	129-201-034	SR0102887	757855	37841	9N	32W	7N01							Destroyed - No Depth	Destroyed - No Depth	Destroyed		No		
CC149	129-220-45	SR0101914	741647	10/25/2000	9N	32W	9E	410	400	250				Alluvium/Paso Robles	Paso Robles	Domestic		No	430	680
CC150	129-220-054	SR105595		5/24/2008	9N	32W	9N	580	550	141				Alluvium/Paso Robles	Paso Robles	Irrigation		No	425	566
CC151	129-220-024	SR0107524	1082581	11/1/2010	9N	32W	16M	350	340	70				Quaternary Alluvium/ Paso Robles	Paso Robles	Irrigation		No	393	463
CC152	129-210-19	555		7/29/1977	9N	32W	17E	500	452					Alluvium/Paso Robles	Paso Robles	Domestic/Irrigation		No		
CC153	129-210-20	992	106367	12/6/1977	9N	32W	17K	361	360					Alluvium/Paso Robles	Paso Robles	Domestic		Yes		
CC155		511	82386	8/12/1976	9N	32W	18H1	385	385					Alluvium/Paso Robles	Paso Robles	Domestic		Yes		
CC156	129-210-005	103292	748800	7/9/2004	9N	32W	18H2	242	237	87				Alluvium/Paso Robles	Paso Robles	Domestic/Irrigation		Yes	351	438
CC157	129-210-03	SR107901	E0135916	7/20/2011	9N	32W	18H3	410	410					Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC158	101-040-21	990		8/8/1977	9N	32W	19F1	696	601	268				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	342	610
CC159	129-040-21	1001			9N	32W	19F2							Destroyed - No Depth	Destroyed - No Depth	Destroyed		No		
CC160	101-040-021	1197		8/2/2016	9N	32W	19G	785	785	370	470'-600'	630'-785'		Paso Robles/Careaga	Careaga	Agricutural	0-50'	No	391	761
CC161			39346	9/23/1966	9N	32W	19H1	505	500					Paso Robles/Careaga	Careaga	Industrial		No		
CC162	101-040-022	0001111		6/9/2016	9N	32W	19H2	500	500	445				Paso Robles/Careaga	Careaga	Domestic		No	305	750
CC163	101-050-003	465	105191	3/4/1977	9N	32W	20A	385	385					Paso Robles/ Careaga	Careaga	Domestic/Irrigation		No		
CC164	101-050-040	SR0105814	1082558	4/13/2009	9N	32W	20B01	620	600	359				Alluvium/ Paso Robles/ Careaga	Careaga	Domestic		No	344	703
CC165	101-050-041	SR0105813	1082557	2/10/2009	9N	32W	20B02	620	600	457				Alluvium/Paso Robles/ Careaga	Careaga	Domestic		No	203	660
CC166				27607	9N	32W	20D01	455						Paso Robles	Paso Robles	Destroyed		No		
CC167				5/25/1976	9N	32W	20D02	700	700					Alluvium/Paso Robles/Careaga	Careaga	Industrial Oil Field		No		
CC168	101-050-038	SR0104488		7/2/2006	9N	32W	20E	400	400	261				Paso Robles/ Careaga	Careaga	Domestic/ Irrigation		No	410	671
CC169	ntionally left blank																			
CC170	101-050-032	1971		9/22/1978	9N	32W	20G	514	514					Alluvium/Paso Robles/Careaga	Careaga	Domestic/Irrigation		No		
CC171				5/6/1905	9N	32W	20H	236		210	220'-236'			Paso Robles	Paso Robles	Stock		No	450	660
CC172	101-050-005		294579	4/19/1989	9N	32W	21A1	346	322	96				Alluvium/ Paso Robles	Paso Robles	Domestic		Yes		96
CC173	101-050-05	101398		3/1/2000	9N	32W	21A2	220	220		160-220			Alluvium/Paso Robles	Paso Robles	Domestic/Agricultural		No		
CC174	101-050-004	2043	51604	1/12/1979	9N	32W	21D	420	420		216-405			Alluvium/Paso Robles	Paso Robles	Domestic/Irrigation	0-50	No		
CC175	101-050-11	SR0103245		6/10/2004	9N	32W	22N	205	205	75				Paso Robles	Paso Robles	Domestic/Irrigation		Yes		75
CC176			159021	12/4/1986	9N	32W	28F	295	275	70				Paso Robles	Paso Robles	Other	0-22'	No		70
CC177	101-050-016	673	511158	7/6/1998	9N	32W	28R	500	430	250				Paso Robles/ Careaga	Careaga	Domestic		No		250
CC178	101-070-048	SR103688	0905313	5/10/2005	9N	32W	29G1	580'	550'	285	350'-550'			Careaga/Foxen	Foxen	Domestic	0-21'	No		285
CC179	101-070-058	8970		12/13/1991	9N	32W	29G2	400	400					Paso Robles/Careaga	Careaga	Domestic/Agricultural		No		
CC180			106994	2/28/1975	9N	32W	29J	602	580		250'-280'	430'-580'		Paso Robles/ Careaga/Foxen	Foxen	Domestic	0-50'	No		
CC181	101-050-022	0104011	E031011	10/7/2005	9N	32W	29R1	640	550	500				Paso Robles/Careaga	Careaga	Domestic		No	500	1000
CC182	101-050-023	SR0105540		4/16/2008	9N	32W	29R2	600	600		300-600			Paso Robles/Careaga	Careaga	N/A		No		
CC184	101-050-023	SR0103734		5/20/2005	9N	32W	32A01	550	522	110	322-522			Alluvium/Paso Robles/ Careaga	Careaga	Domestic		No	790	900
CC193	101-070-029	8852	316874	11/9/1990	9N	32W	33G	399	317	142				Paso Robles/Careaga	Careaga	Domestic		No	858	1000
CC199	101-070-067	104346		6/1/2006	9N	32W	33R2	65	65		35'-65'			Careaga	Careaga	Domestic/ Irrigation	0-32'	No		
CC200	101-070-067	104414		6/1/2006	9N	32W	33R3	60	60		30'-60'			Careaga	Careaga	Domestic/ Irrigation	0-24'	No		
CC201	133-070-039	SR0105311		2/12/2008	9N	32W	34A	200	150	50				Alluvium/ Careaga	Careaga	Domestic		No	620	670
CC202	101-060-45	SR0100839	521865	8/9/1999	8N	33W	2D	970	820	166				Paso Robles/Careaga	Careaga	Domestic/Irrigation		No	754	920
CC203	101-060-45	SR100016	700854	9/25/1998	8N	33W	2M	1080	1080	173				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	667	840
CC204	101-060-45	1003	700845	8/24/1998	8N	33W	2Q	600	340		220-320			Alluvium/Paso Robles/Careaga	Careaga	Domestic		No		
CC205			715604	12/23/1999	8N	33W	3P	462	460	57	240-460			Alluvium/Paso Robles	Paso Robles	Irrigation		No	603	660
CC206	101-060-066	SR0106424	1082560	7/20/2009	8N	33W	3Q	455	450	40	100-450			Alluvium/Paso Robles	Paso Robles	Irrigation		No	630	670

Table 5.1-1c: Water Wells Outside of Boundary

Map Number	APN	SB Co.Permit	DWR Ref.	Date Completed	TWN	RNGE	SEC	Total Depth (bgs feet)	Compl. Depth (bgs feet)	Depth of Static Water (bgs feet)	Screen Interval 1 (bgs feet)	Screen Interval 2 (bgs feet)	Screen Interval 3 (bgs feet)	Completed Formation	Formation TD	Purpose	Surface Seal (bgs feet)	Chemical Report	SS Depth of GW	Elevation (wells with water level)
CC207	101-060-45	SR100017	521842	9/23/1998	8N	33W	3R	1100	980	186	290-490	550-620	650-960	Alluvium/Paso Robles	Paso Robles	Irrigation		No	565	751
CC208	101-060-069	SR0105299		12/14/2008	8N	33W	4G	430	395	175	205-305	325-385		Paso Robles/Careaga	Careaga	Domestic		No	647	822
CC209	101-060-066	SR0106480		6/15/2009	8N	33W	4R	440	440		80-420			Paso Robles/Careaga	Careaga	N/A		No		
CC210			812774	7/24/2000	8N	33W	9H	345	175		30-185			Paso Robles/Careaga	Careaga	N/A		No		
CC211	101-060-066	SR0106635		8/4/2009	8N	33W	10C	490	490		100-480			Paso robles	Paso Robles	N/A		No		
CC212	101-060-45	SR100015	700853	9/14/1998	8N	33W	11B	1020	970	102				Alluvium/Paso Robles/Careaga	Careaga	Irrigation		No	654	756
CC213		9143		8/16/1992	8N	33W	12F	810	800	400	0-400			Careaga	Careaga	Irrigation	0-50'	No	722	1122
CC214	101-060-50	664	538318	7/2/1998	8N	33W	13D	540	525		345-425	445-525		Orcutt/Paso Robles	Paso Robles	Domestic		No		
CC215	101-060-23	552	700841	5/30/1998	8N	33W	13F	1080	1070					Alluvium/ Paso Robles	Paso Robles	Irrigation		No		
CC216	101-060-23	662	700842	6/9/1998	8N	33W	13Q	1150	1140					Orcutt/Paso Robles	Paso Robles	Irrigation		No		
CC217	101-100-34	567	478206	7/21/1997	8N	33W	13R	1200	630		300-460	480-610		Paso Robles	Paso Robles	Irrigation		No		
CC218	101-090-022	SR0109452	962159	6/25/2014	8N	33W	24J1	350	305	87	100-300			Alluvium/ Paso Robles	Paso Robles	Irrigation		No	485	572
CC219	101-100-02		561915	12/20/1995	8N	33W	24J2	185	185	130	20'-160'			Alluvium/ Paso Robles	Paso Robles	Domestic	0-20'	No	462	592
CC220	101-090-022	103478	907655	1/21/2005	8N	33W	24J3	850	820		370'-810'			Alluvium/Paso Robles	Paso Robles	Domestic/ Irrigation		No		
CC221	101-090-022	SR0102991	757872	11/26/2003	8N	33W	24K1	880	743	158	390'-490'	550'-590'	750'-850'	Paso Robles/ Careaga	Paso Robles Careaga	Domestic/ Irrigation	0-50'	No	442	600
CC222	101-090-021	104003		10/12/2005	8N	33W	24M	950	880	190	240'-255'	310'-330'		Alluvium/ Paso Robles/ Careaga	Careaga	Irrigation	0-40'	No	341	531
CC223	101-090-22	576	585025	9/6/1997	8N	33W	24Q2	987	980		250-980			Alluvium/Paso Robles	Paso Robles	Irrigation		No		
CC224	101-090-22	7516	335768	12/4/1998	8N	33W	24Q1	700	670		400-510	550-660		Alluvium/Paso Robles	Paso Robles	Irrigation	0-30'	No		
CC225	133-200-002	SR106820		11/2/2009	8N	32W	14F	60	50	10	20'-50'			Alluvium/Upper Sisquoc	Upper Sisquoc	Irrigation	0-20'	No	852	862
CC226	101-300-008	SR0102315		1/7/2001	8N	32W	17G	440	390	200	130'-380'			Careaga	Careaga	Domestic/ Irrigation	0-50'	No	656	856
CC227	NA	8957		7/5/1991	8N	32W	17H	240	240	100	60'-240'			Careaga	Careaga	Domestic/ Irrigation	0-50'	No	838	938
CC228	101-060-032	10161		1/15/1992	8N	32W	17N	320	270		140'-260'			Careaga	Careaga	Domestic/ Irrigation	0-50'	No		
CC229	101-100-035			2/1/1989	8N	32W	19A	500	500	180	260'-500'			Paso Robles/ Careaga	Careaga	Domestic/Irrigation	0-50'	Yes	682	862
CC230	101-100-023	102856			8N	32W	19M	360'	360'		200'-360'			Paso Robles	Paso Robles	N/A	0-50'	No		
CC231	101-100-027	5565		4/4/1988	8N	32W	20G	503	473		205-465			Careaga	Careaga	Domestic/ Irrigation	0-50'	No		
CC232	101-300-006	SR0102115	710824	6/25/2001	8N	32W	20H	500'	400'	47	160'-390'			Alluvium/ Careaga	Careaga	Domestic/ Irrigation	0-50'	No	708	755
CC233	101-100-033	SR 100525		3/11/1999	8N	32W	20K4	500	450	168	240'-440'			Careaga	Careaga	Irrigation	0-58'	No	658	826
CC234	101-100-033		287807	4/29/1989	8N	32W	20K1	302	302	115	202-302			Paso Robles/ Careaga	Careaga	Domestic	0-30'	No	735	850
CC235	101-100-033		287808	5/1/1989	8N	32W	20K2	280	280	105	180-280			Paso Robles/ Careaga	Careaga	Domestic	0-30'	No	665	770
CC236	101-100-033		287832	6/21/1989	8N	32W	20K3	480	300	70	140-300			Alluvium/Careaga	Careaga	Domestic	0-50'	No	783	853
CC237	133-100-053	8880		6/3/1991	8N	32W	21G	460	370		210'-365'			Paso Robles	Paso Robles	Domestic	0-50'	Yes		
CC238	133-100-050	WP555	e0303828	3/10/2016	8N	32W	22K01	535'	460'	61	220'-440'			Paso Robles	Paso Robles	Domestic/ Irrigation	0-55'	No	820	881
CC239	133-100-051	7494	276957	11/10/1988	8N	32W	22K02	472'	460'		190'-450'			Paso Robles	Paso Robles	Domestic	0-50'	No		
CC240	133-100-052	8881		5/22/1991	8N	32W	22L	500	345		155'-335'			Paso Robles	Paso Robles	Domestic	0-50'	No		
CC241	133-100-35			1/21/1984	8N	32W	22R	613	613		203-603			Alluvium/ Paso Robles/ Careaga	Careaga	Domestic/ Irrigation	0-50'	No		
CC242	133-100-062	100444		5/20/1999	8N	32W	23P	640	640	134	440'-640'			Paso Robles	Paso Robles	Domestic/ Irrigation	0-25'	Yes	740	874
CC243	129-146-012	Sr0108942	E0192179		9N	33W	8P1	1255	1185	694				Loess/Paso Robles/Careaga	Careaga	Domestic		No	72	766
CC244	101-060-23	663	700839		8N	33W	13P							Destroyed - No depth	Destroyed - No depth	Destroyed		No		
CC245	101-090-22		757866		8N	33W	24K2	480						Alluvium/Paso Robles	Paso Robles	Destroyed		No		
CC246	133-100-48	10059	335788	3/10/1990	8N	32W	24N1	560	560		230-550'			Alluvium/Paso Robles	Paso Robles	Irrigation	0-50'	No		
CC247	133-100-54	102331	782548	1/7/2002	8N	32W	24N2	560	540	70	180-200	370-530		Alluvium/Paso Robles	Paso Robles	Domestic/Irrigation	0-52	No	710	780
CC248	133-100-23	SR0102230	763328	12/28/2001	8N	32W	25F	656	605	127	155-455	555-595		Paso Robles	Paso robles	Domestic/Irrigation	0-50	No	744	871
CC249			337739	010/20/1989	8N	32W	25E1	325	309		180-306			Paso Robles	Paso robles	Domestic/Irrigation	0-21	No		
CC250			67412	12/1/1980	8N	32W	25E2	410	390		130-150	180-280	300-380	Paso Robles	Paso robles	Domestic/Irrigation	0-23	No		
CC251	133-100-33	2821	221040	6/23/1983	8N	32W	25H	730	675		245-405	484-585	635-665	Paso Robles	Paso robles	Domestic/Irrigation	0-50	No		
CC252			50949	8/17/1981	8N	32W	25B	324	275		155-196			Paso Robles	Paso robles	Domestic/Irrigation	0-53	No		
CC253	133-100-032	SR018879	e0214335	5/21/2014	8N	32W	25D	215	200	126	90-190			Paso Robles	Paso robles	Domestic/Irrigation	0-53	No	640	766
CC254	133-100-25	101954	710802	1/3/2001	8N	32W	26M	843	760	153	350-470	590-750		Paso Robles	Paso Robles	Domestic/Irrigation	0-50	No	557	710
CC255	133-130-026	SR0108709	e0185635	2/4/2013	8N	32W	26N	1000	979	125	500-950			Paso Robles/Careaga	Careaga	Domestic	0-60	No	680	805
CC256	133-100-35	7492	276954	10/29/1988	8N	32W	27G1	535	505		195-495			Paso Robles	Paso Robles	Domestic/Irrigation	0-50	No		
CC257	133-130-17	8611	335771	10/30/1989	8N	32W	27G2	622	583		315-355	375-395	425-575	Paso Robles	Paso Robles	Irrigation	0-50	No		
CC258	133-130-16	8586	335770	12/15/1989	8N	32W	27F	610	610		340-400	420-460	560-600	Paso Robles	Paso Robles	Irrigation	0-50	No		
CC259	133-130-13	7542	335752	10/19/1989	8N	32W	27C	507	500		330-490			Paso Robles	Paso Robles	Irrigation	0-50	No		
CC260	133-13-006	9148	337856	6/25/1990	8N	32W	27N	603	540		170-310	370-530		Paso Robles	Paso Robles	Irrigation	0-50	No		
CC261	133-130-015	288	446213	8/15/1995	8N	32W	27K	885	860		360-440	460-500	620-850	Paso Robles	Paso Robles	Irrigation	0-50	No		
CC262	133-130-015	7540	335767	12/7/1989	8N	32W	27P	595	550		280-340	360-410	480-540	Paso Robles	Paso Robles	Irrigation	0-50	No		
CC263	133-070-038	SR0104467	1098085	7/18/2006	8N	32W	27P2	125	120	78	60-120			Paso Robles	Paso Robles	Domestic	0-25	No	654	732
CC264		SR108295	e0151331	4/1/2012	10N	33W	32H	660	650	240	370-400	410-430	440-460	Loess/Paso robles/Careaga	Careaga	Irrigation	0-100	No		240
CC265	129-010-26	SR5015	153036	4/18/1986	10N	33W	32E	565	531		372-449	449-526		Loess/Paso robles/Careaga	Careaga	Domestic/Irrigation	0-50	No		
CC266	129-01-18	4198	172106	7/10/1985	10N	33W	32M	520	520	298	400-520			Loess/Paso robles/Careaga	Careaga	Domestic/Irrigatino	0-55	No	118	416
CC267			322770	4/6/1990	10N	33W	32L	710	700		400-700			Paso robles/Careaga	Careaga	Irrigation	0-60	No		
CC268			40806	4/6/1971	10N	33W	32P	470	470	311	442-462			Loess/Paso robles/Careaga	Careaga	Irrigation	0-50	No	154	465
CC269			38115	12/30/1971	10N	33W	32G	392	392	225	385-390			Loess/Paso robles/Careaga	Careaga	Domestic	0-50	No	150	375
CC270			64908	5/12/1978	10N	33W	29K	330	330	197	319-326			Paso Robles	Paso Robles	Domestic	0-20	No	121	318
CC271	128-100-033	SR0104271	1098087	4/1/2006	10N	33W	29M	455	445	187	305-445			Paso Robles	Paso Robles	Irrigation	0-50	No	124	311
CC272	129-010-035	SR103574	905324	2/16/2005	10N	33W	29M2	510	390	195	230-390			Paso Robles	Paso Robles	Domestic/Irrigation	0-51	No	116	311
CC273	129-010-070	SR0102909	786274	10/7/2003	10N	33W	29N	600	600	326	380-600			Paso/Careaga	Careaga	Domestic/Irrigation	0-60	No	-13	313
CC274	128-100-04	SR0109000	962151	10/15/2013	10N	33W	29J	670	640	228	240-620			Paso/Careaga	Careaga	Irrigation	0-50	No	99	327
CC275	12-820-03		107376	3/3/1976	10N	33W	29N2	315	300		260-300			Paso Robles	Paso Robles	Domestic	0-50	No		
CC276	128-100-014	SR104312	1085518	4/4/2006	10N	33W	29M3	410	410	182	290-410			Paso Robles	Paso Robles	Domestic	0-50	No	129	311
CC277	129-010-33	7393	276928	7/21/1988	10N	33W	29M4	660	660		250-410	430-650		Paso/Careaga	Careaga	Domestic/Irrigation	0-50	No		

Table 5.1-1c: Water Wells Outside of Boundary

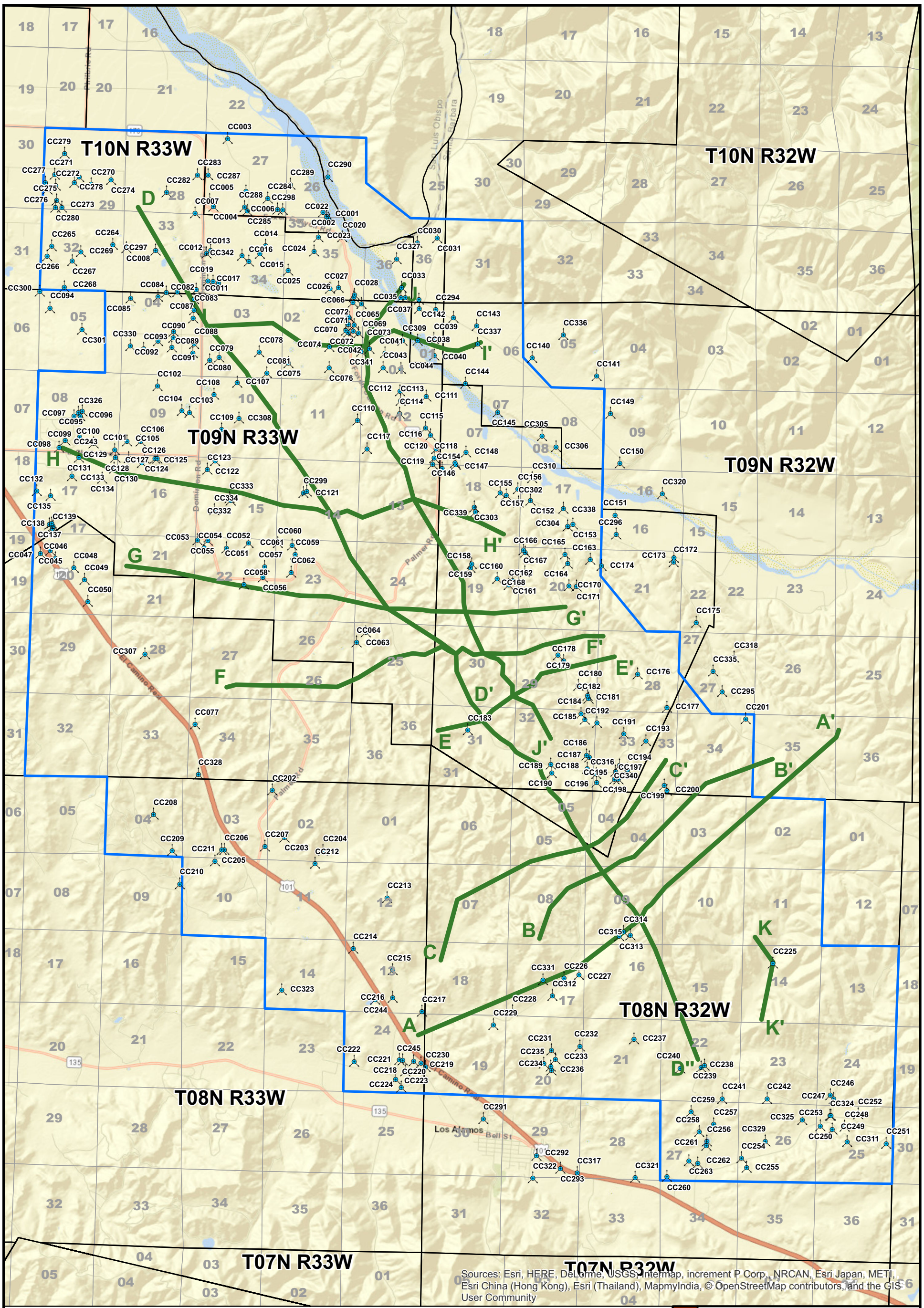
Map Number	APN	SB Co.Permit	DWR Ref.	Date Completed	TWN	RNGE	SEC	Total Depth (bgs feet)	Compl. Depth (bgs feet)	Depth of Static Water (bgs feet)	Screen Interval 1 (bgs feet)	Screen Interval 2 (bgs feet)	Screen Interval 3 (bgs feet)	Completed Formation	Formation TD	Purpose	Surface Seal (bgs feet)	Chemical Report	SS Depth of GW	Elevation (wells with water level)
CC278			82377	12/30/1975	10N	33W	29L	297	297	177	284-294			Paso Robles	Paso Robles	Domestic	0-20	No	137	314
CC279			82379	3/15/1976	10N	33W	29F	286	286	171	260-275			Paso Robles	Paso Robles	Domestic	0-24	No	140	311
CC280			961859	11/20/2011	10N	33W	29N3	520	500	200	300-500			Paso Robles	Paso Robles	Irrigation	0-50	No	111	311
CC281			82378	1/30/1976	10N	33W	29L2	290	290	172	278-288			Paso Robles	Paso Robles	Domestic	0-24	No	139	311
CC282	128-100-27	SR0105231	1098058	12/18/2007	10N	33W	28K	675	580	188	300-570			Paso Robles/Careaga	Careaga	Irrigation	0-50	No	142	330
CC283		5020	153050	7/23/1986	10N	33W	28H	505	460					Paso Robles/Careaga	Careaga	Domestic/Irrigation	0-50	No		
CC284			64921	2/12/1979	10N	33W	27R2	257	257	42	77-177			Paso Robles	Paso Robles	Irrigation		No	299	341
CC285	127-320-14	5556	182641	1/8/1988	10N	33W	27Q	405	400		155-395			Paso Robles/Careaga	Careaga	Irrigation	0-30	No		
CC286	127-320-14	3309	222807	4/12/1984	10N	33W	27L	404	400	43	100-285	335-390		Paso Robles/Careaga	Careaga	Irrigation	0-30	No	295	338
CC287	127-320-33	7530	335742	9/22/1989	10N	33W	27M	572	460		250-330	350-450		Paso Robles/Careaga	Careaga	Irrigation	0-50	No		
CC288	127-320-31	7532	335756	11/2/1989	10N	33W	27P	469	400		270-390			Paso Robles/Careaga	Careaga	Irrigation	0-51	No		
CC289	129-030-012	SR0105187	907258	10/12/2008	10N	33W	26M	205	200	68	60-200			Alluvium/Paso Robles	Paso Robles	Irrigation	0-52	No	272	340
CC290	129-30-1	2000-141	725024	7/8/2000	10N	33W	26G	127	120		20-100			Alluvium/Paso Robles	Paso Robles	Irrigation	0-20	No		
CC291	101-110-035		E046752	11/18/2006	8N	32W	30G	1010	962	89	217-352			Paso Robles	Paso Robles	Public	0-60	No		
CC292	101-026-046	SR0107215	0907302	8/31/2010	8N	32W	29L	521	510	118	180-300	320-400	420-510	Paso Robles	Paso Robles	Public	0-118	No		
CC293			4210002-004	1/1/1988	8N	32W	29Q		500		180-240	320-400	420-500	Paso Robles	Paso Robles	Public	0-120	No		
CC294	090-431-004	94-059	490913	5/16/1994	9N	33W	1A	80	80		45-75			Alluvium	Paso Robles	Irrigation	0-30			
CC295	133-070-031	103926	0907671	9/26/2005	9N	32W	27K	140	130	36	80-120			Alluvium/Paso Robles	Paso Robles	Domestic	0-50			
CC296	129-220-015	105075	0907275	8/25/2007	9N	32W	16N	100	100	53	60-100			Alluvium/Paso Robles	Paso Robles	Public	0-53			
CC297			61643		10N	33W	33F	965	550		350-550			Paso Robles/ Careaga	Careaga	Irrigation				
CC298			105188	2/25/1977	10N	33W	27R	520	520		160-510			Paso Robles/Careaga	Careaga	Irrigation				
CC299			107040	11/4/1975	9N	33W	14F2	890	890		400-830			Paso Robles/Careaga	Careaga	Irrigation				
CC300			32186	4/18/1966	9N	33W	5D2	393	393	300	360-363	389-392		Loess/Paso Robles	Paso Robles	Domestic				
CC301			78842	4/13/1973	9N	33W	5F	674	674		376-539	579-660		Loess/Paso Robles	Paso Robles	Industrial				
CC302			104167	12/16/1965	9N	32W	18H	508	454		147-454			Alluvium/Paso Robles	Paso Robles	Irrigation				
CC303			106973	10/9/1974	9N	32W	18F	247	245		48-71	91-151	171-193	Paso Robles	Paso Robles	Irrigation				
CC304			38156	12/18/1968	9N	32W	17K2	202	202	63	132-138	148-151	180-194	Paso Robles	Paso Robles	Irrigation				
CC305			67282	3/11/1971	9N	32W	8M	650	570		240-570			Alluvium/Paso Robles/Careaga	Careaga	Irrigation				
CC306			67287	3/12/1971	9N	32W	8L	55	55					ND	ND	Irrigation				
CC307	101-080-70	7504	256001	5/4/1989	9N	33W	28F	800	700		330-340			Alluvium/Paso Robles/Careaga	Careaga	Irrigation				
CC308			051698	5/29/1980	9N	33W	10F				393-975			Paso Robles/ Careaga	Careaga	Domestic/Irrigation				
CC309	129-100-07	5286	161612	11/26/1986	9N	33W	1F	505	495		125-485			Alluvium/Paso Robles/Careaga	Alluvium/Paso Robles/Careaga	Irrigation				
CC310		2820	221034	5/2/1983	9N	32W	17D				97.6-137.8	178-218.2	258-389	Alluvium/Paso Robles	Paso Robles	Domestic/Irrigation				
CC311			067412	12/1/1980	8N	32W	25F	410	390		130-150	180-220	260-280	Paso Robles	Paso Robles	Domestic/Irrigation				
CC312			161097	8/7/1987	8N	32W	17K	400	370	92	130-170			Careaga	Careaga	Domestic/Irrigation				
CC313		5548	194039	6/25/1987	8N	32W	9P2	300	0					N/A	Sisquoc	Test Hole				
CC314	133-100-11	5544	194041	6/17/1987	8N	32W	9P1	450	0					N/A	Sisquoc	Test Hole				
CC315	133-100-12	5548	194040	6/24/1987	8N	32W	9Q	350	0					N/A	Sisquoc	Test Hole				
CC316	101-070-066	103830	1079306	6/27/2005	9N	32W	33N	145	140	52	40-140			Careaga	Careaga	Domestic/Irrigation				
CC317	133-130-009	SR0103311	0907621	7/23/2004	8N	32W	28N	562	524	133	310-514			Paso Robles	Paso Robles	Domestic/Irrigation				
CC318		SR0106788	1090214	10/5/2009	9N	32W	27G	200	200	116	80-200			Paso Robles/Careaga	Careaga	Irrigation				
CC319	129-010-01	SR0108981	0962150	11/30/2013	10N	34W	36F	1000	950	326	400-940			Paso Robles	Paso Robles	Irrigation				
CC320		107959	1082594	10/24/2011	9N	32W	16G	460	455		135-435			Alluvium/Paso Robles	Paso Robles		0-40			
CC321	133-013-10	8592	335786	3/2/1990	8N	32W	27N	601	530		250-520			Alluvium/Paso Robles	Paso Robles	Irrigation	0-50			
CC322	101-270-048	643	511245	10/22/1998	8N	32W	32C	820	690	78	290-370	390-410	440-540	Paso Robles	Paso Robles	Irrigation	0-55			
CC323	101-060-17	607	541450	11/30/1997	8N	33W	14M	1009	960		320-540	600-950		Paso Robles	Paso Robles	Irrigation	0-50			
CC324			106875	3/27/1976	8N	32W	25D1				268-700			Paso Robles	Paso Robles	Irrigation	0-50			
CC325	133-100-078	631	0293013	12/1/2015	8N	32W	26B	745	735		305-600	640-720		Paso Robles	Paso Robles	Irrigation	0-50			
CC326	129-120-15	SR0103207	0907633	7/8/2004	9N	33W	8F	1200	1180	560	660-1160			Paso Robles	Paso Robles	Domestic/Irrigation	0-50			
CC327	90-431-04		051631	6/7/1979	10N	33W	36F	74	74		29-70			Paso Robles	Paso Robles	Domestic/Irrigation				
CC328	101-060-069	SR0105299	E063593	12/14/2007	9N	33W	34N	430	395	175	205-305	325--385		Paso Robles	Paso Robles	Domestic	0-52			
CC329	133-151-059	SR0104584	E048794	9/28/2006	8N	32W	26F	900	675		500-900			Paso Robles	Paso Robles	Irrigation	0-50			
CC330			1083200	1/20/2012	9N	33W	04M	620	600	415	200-220	400-600		Paso Robles	Paso Robles	Irrigaton	0-60			
CC331		8906	080560	8/1/1992	8N	32W	17F	620	600					Careaga	Careaga	Irrgation	0-50			
CC332	129-22-028	9174	351551	2/20/1991	9N	33W	15F1	461	460		250-460			Paso Robles	Paso Robles	Domestic/Irrigation	0-50			
CC333	129-22-028	9197	337853	6/15/1990	9N	33W	15F2	560	525		230-320	360-515		Paso Robles	Paso Robles	Irrigation	0-100			
CC334	129-22-028	9198	351505	7/20/1990	9N	33W	15M	505	460		230-300	320-450		Paso Robles	Paso Robles	Irrgation	0-100			
CC335	133-080-33	518	469900	1/11/1996	9N	32W	27F	940	860	92	280-360	490-650		Paso Robles/Careaga	Careaga	Irrigation	0-51			
CC336			067440		9N	32W	5F	370	370	90	80-370			Paso Robles	Paso Robles	Irrigation	0-26			
CC337			109326	2/24/1966	9N	32W	6F2	318	312	153	160-170	218-252	282-294	Paso Robles	Paso Robles	Irrigation				
CC338			101215	2/2/1965	9N	32W	17F	600	600	169	168-600			Paso Robles	Paso Robles	Industrial				
CC339			106871	3/5/1976	9N	32W	18L	231	231	110	135-231			Paso Robles	Paso Robles	Irrigation				
CC340	129-100-16		106376	9/19/1978	9N	33W	2J	613	600	42	400-580			Paso Robles	Paso Robles	Domestic/Irrigation	0-67			
CC341			78104	7/11/1978	10N	33W	34F	55	55	28	20-55			Paso Robles	Paso Robles	Domestic				

The location of water wells in and around the project area are shown on the **Figure 5.1-3, Water Well Location Map. Figure 5.1-3** shows the locations with the Map Code number "CCXXX" which can be correlated to the table and data in the Appendix 5-I.

Where possible the water wells were plotted on the cross sections listed below to show the relationship of the water well completions to the top confining layer and the total proposed aquifer exemption areas. Cross Section K-K' and C-C' show the two water wells that are completed in the Upper Confining Layer of the Sisquoc Formation (stratigraphically deepest water wells).

Figure 5.1-4 Cross Section A-A' with water wells and total proposed aquifer exemption areas;
Figure 5.1-5 Cross Section B-B' with water wells and total proposed aquifer exemption areas;
Figure 5.1-6 Cross Section C-C' with water wells and total proposed aquifer exemption areas;
Figure 5.1-7a Cross Section D-D' with water wells and total proposed aquifer exemption areas;
Figure 5.1-7b Cross Section D'-D" with water wells and total proposed aquifer exemption areas;
Figure 5.1-8 Cross Section E-E' with water wells and total proposed aquifer exemption areas;
Figure 5.1-9 Cross Section F-F' with water wells and total proposed aquifer exemption areas;
Figure 5.1-10 Cross Section G-G' with water wells and total proposed aquifer exemption areas;
Figure 5.1-11 Cross Section H-H' with water wells and total proposed aquifer exemption areas;
Figure 5.1-12 Cross Section I-I' with water wells and total proposed aquifer exemption areas;
Figure 5.1-13 Cross Section J-J' with water wells and total proposed aquifer exemption areas; and
Figure 5.1-14 Cross Section K-K' with water wells.[10]

[10] No aquifer exemption area occurs on this cross section.



Legend

- Water Wells
- Cross Section
- Study Area

6,000 3,000 0 6,000

Feet

WZI INC.

BAKERSFIELD, CALIFORNIA

CAT CANYON AQUIFER EXEMPTION EXPANSION

WATER WELL LOCATION MAP

DATE: 10/18 | FIGURE: 5.1-3