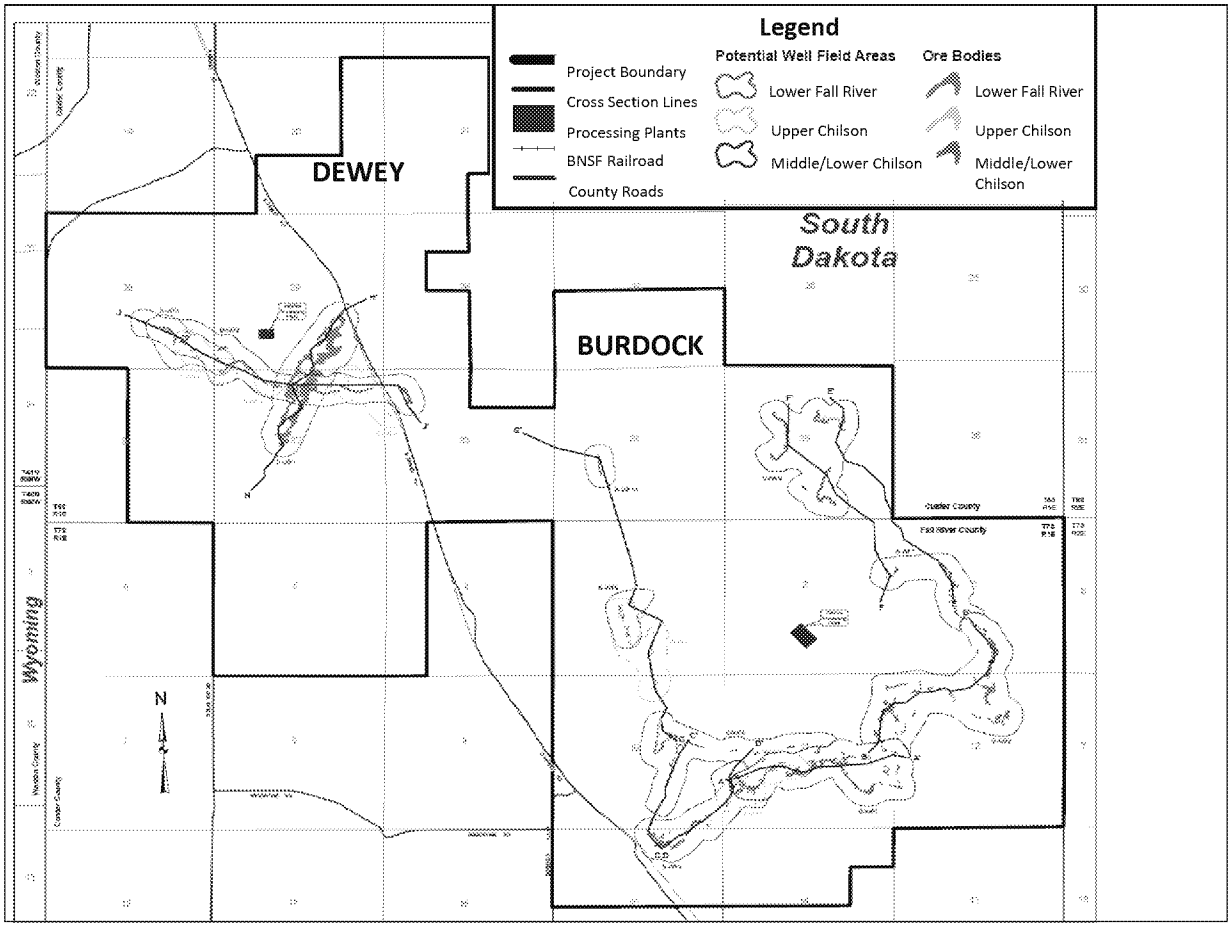
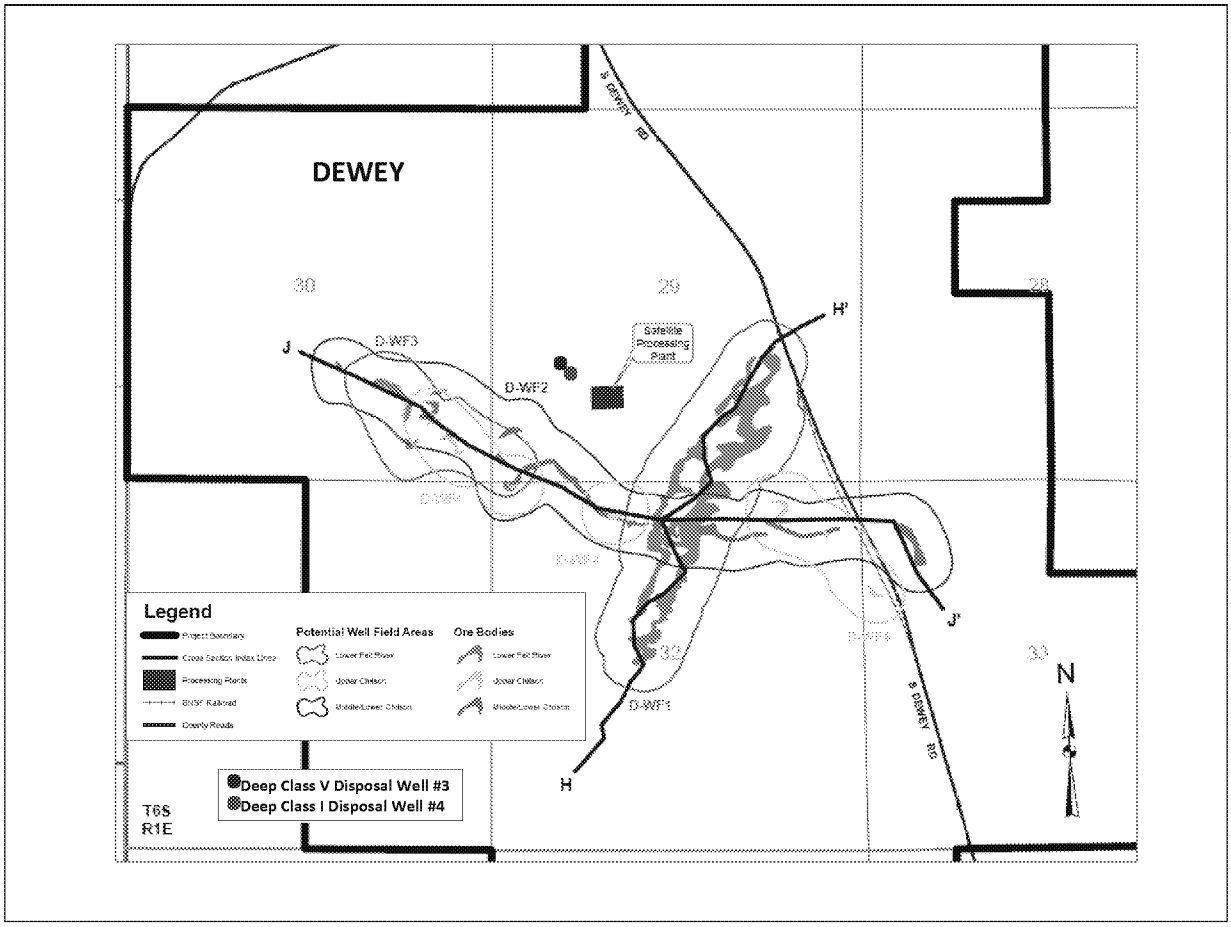
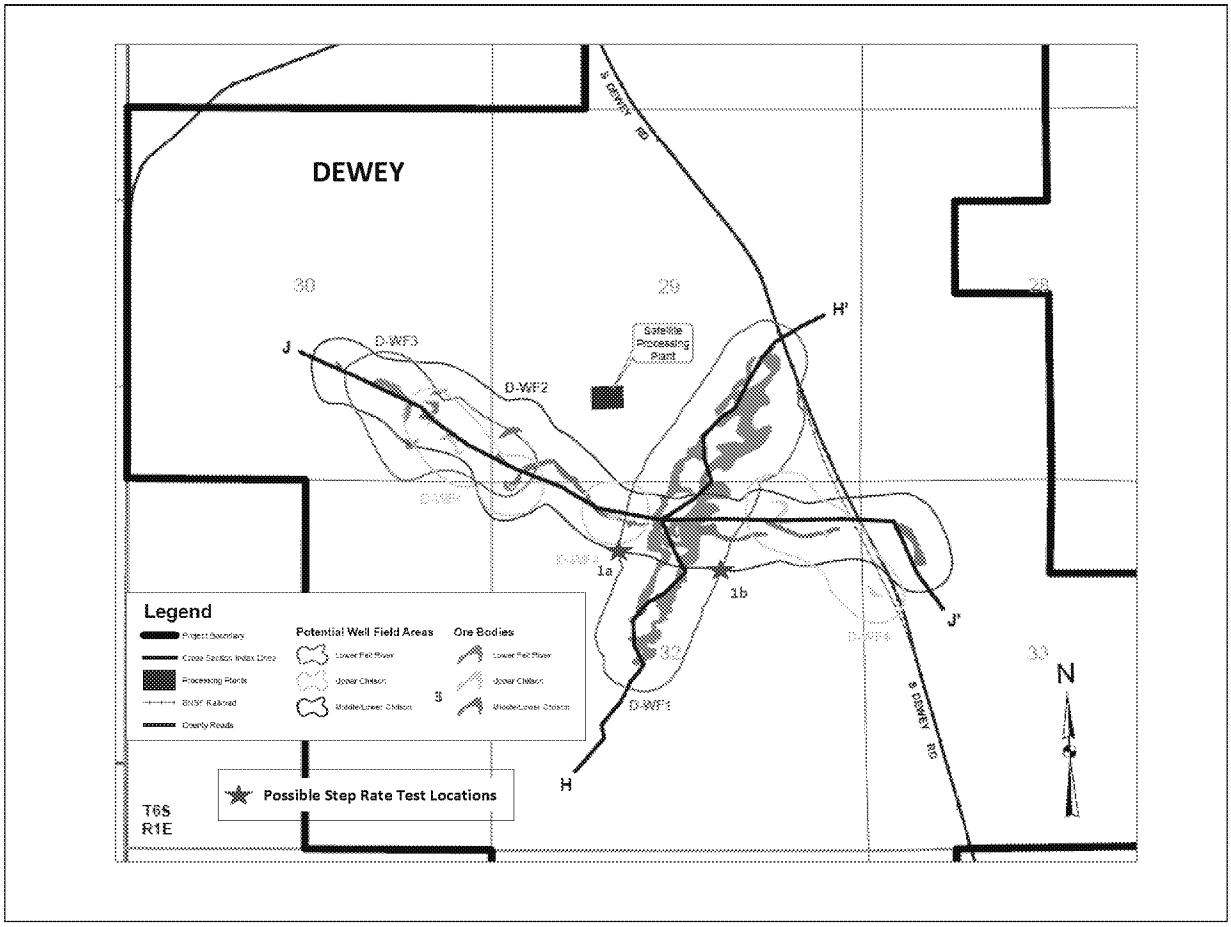

Legend
Project Boundary
Cross Section Lines
Processing Plants
BNSF Railroad
County Roads
Potential Well Field Areas
Lower Fall River
Upper Chilson
Middle/Lower Chilson
Ore Bodies
Lower Fall River
Upper Chilson
Middle/Lower Chilson
DEWEY
BURDOCK
South Dakota
Wyoming
N



Dewey Wellfields
From NRC June 2011 RAI Response Exhibit 3.1-4 (DB_TR_RAI_Vol2d_Exh_3.1-2_thru_5.7-1.pdf)



Dewey Wellfields
From NRC June 2011 RAI Response Exhibit 3.1-4 (DB_TR_RAI_Vol2d_Exh_3.1-2_thru_5.7-1.pdf)

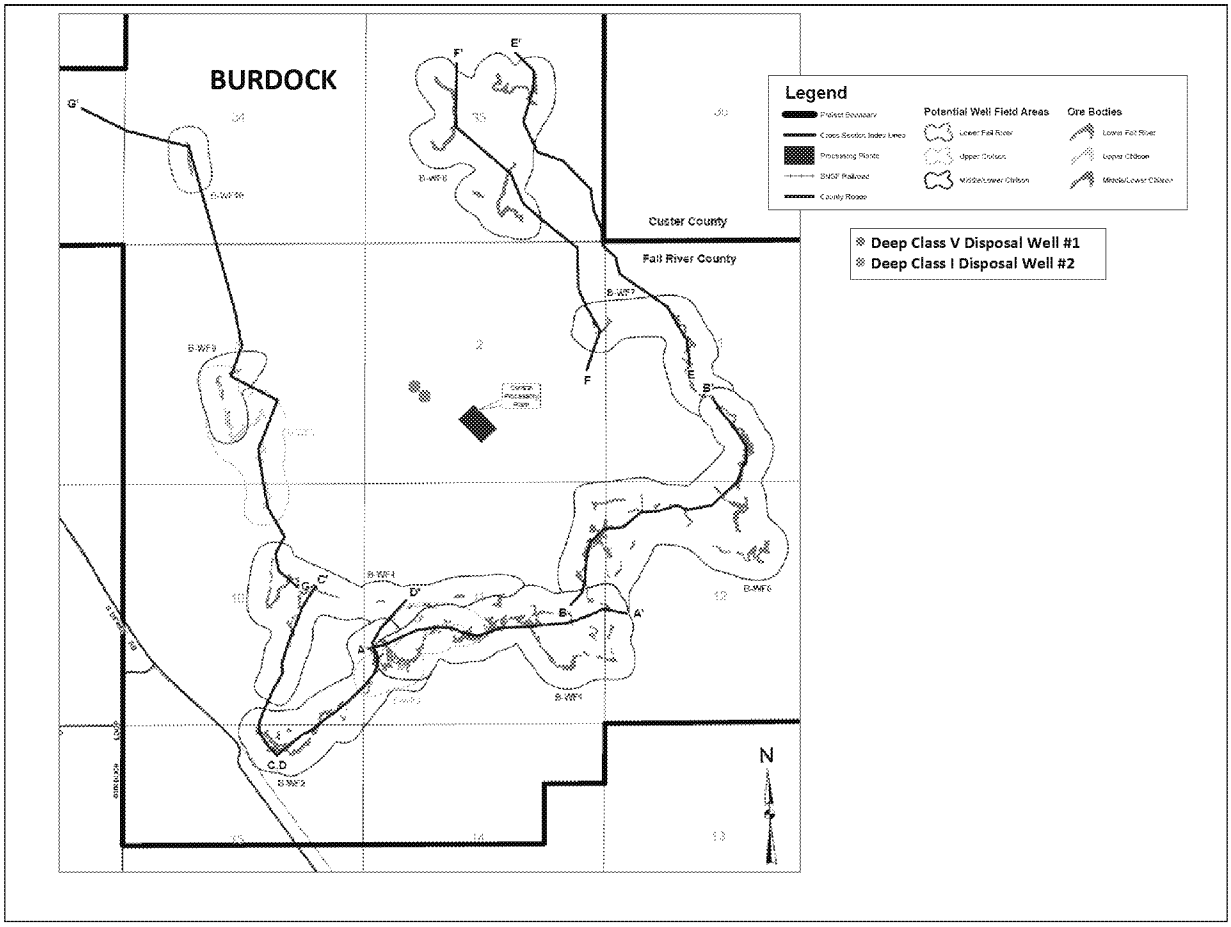
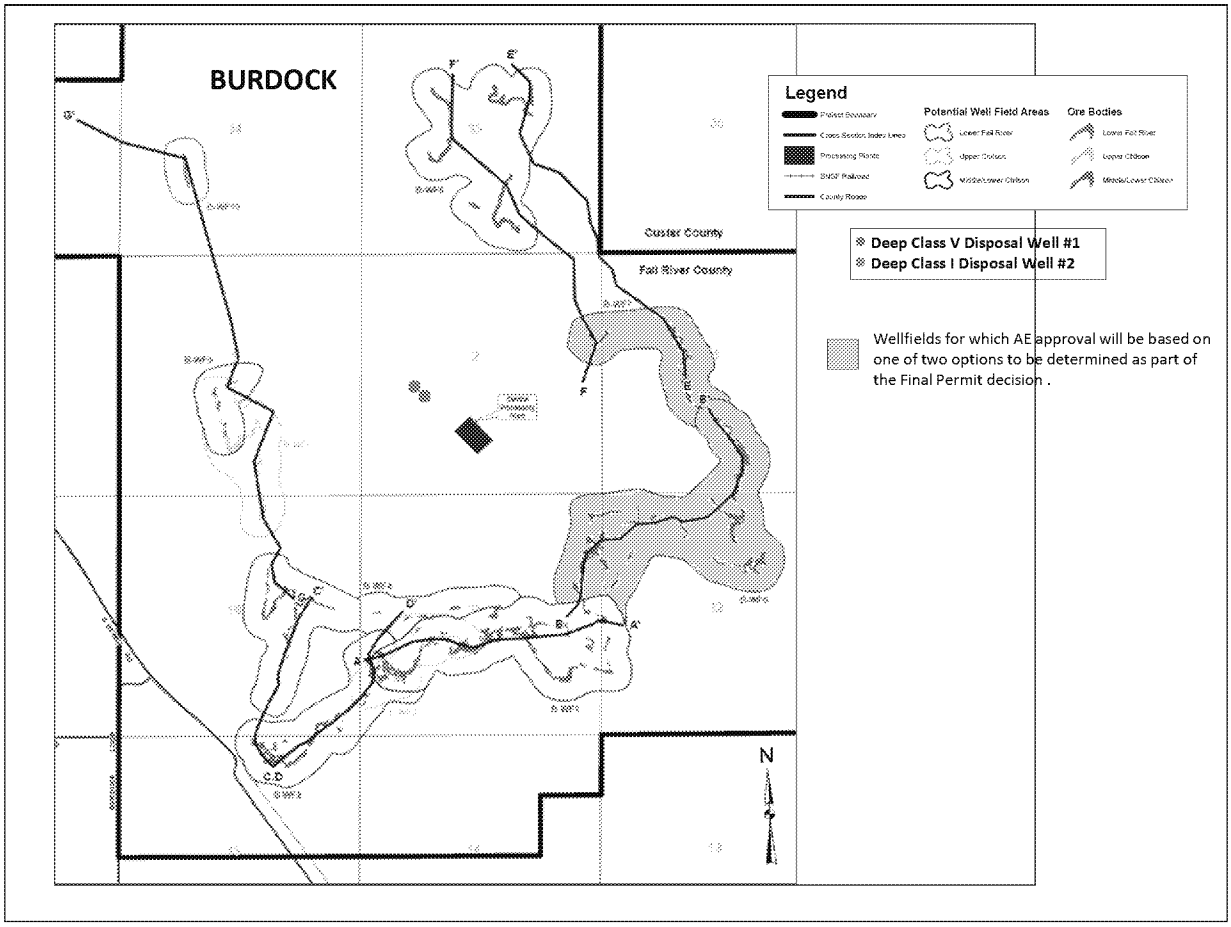
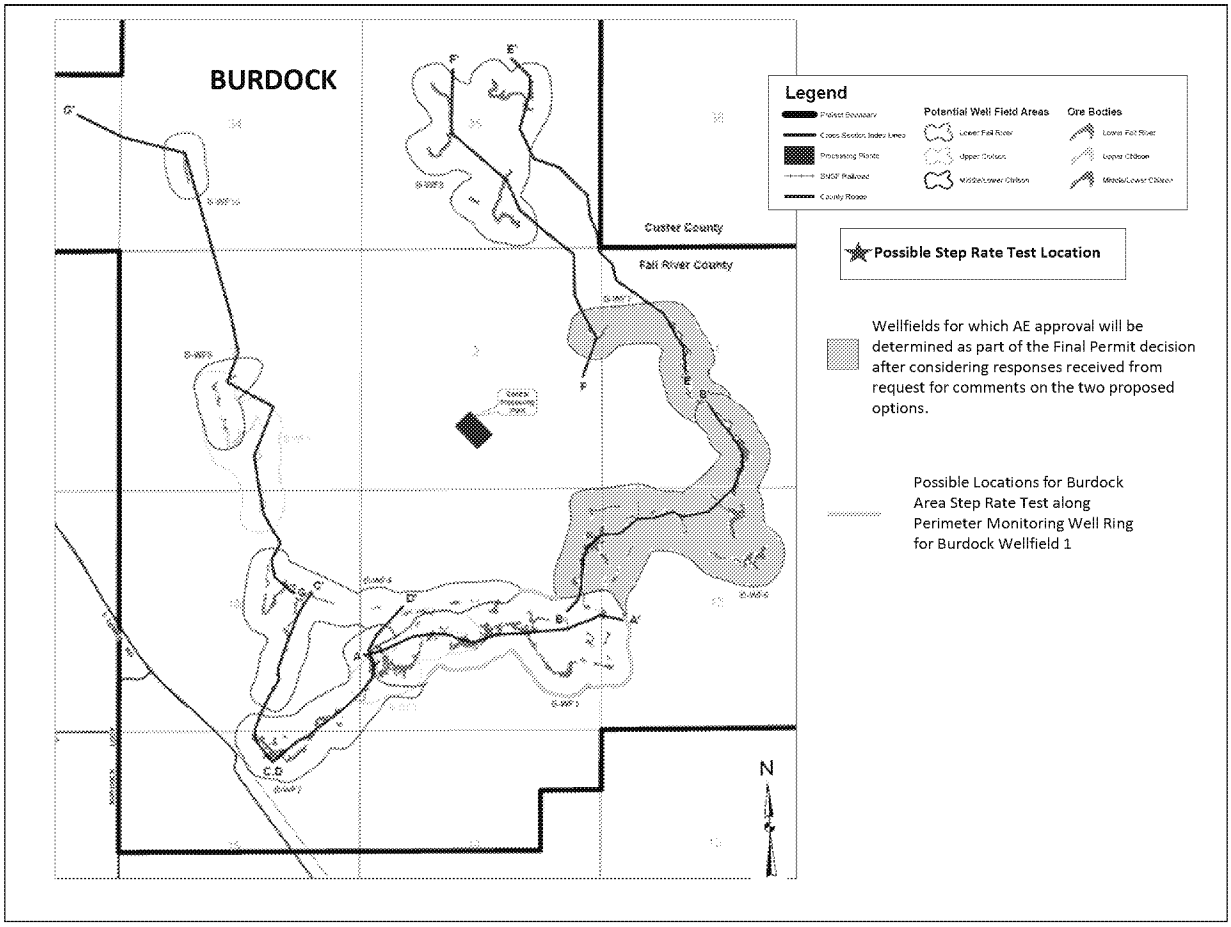


Figure 4a of Class III Fact Sheet


BURDOCK
Legend
Project Boundary
Cross Section Index Lines
Processing Plants
BNSF Railroad
County Roads
Potential Well Field Areas
Lower Fall River
Upper Chilson
Middle/Lower Chilson
Ore Bodies
Lower Fall River
Upper Chilson
Middle/Lower Chilson
Custer County
Fall River County
※ Deep Class V Disposal Well #1
※ Deep Class I Disposal Well #2
Wellfields for which AE approval will be based on one of two options to be determined as part of the Final Permit decision .
N


BURDOCK
Custer County
Fall River County
Legend
Project Boundary
Cross Section Index Lines
Processing Plants
BNSF Railroad
County Roads
Potential Well Field Areas
Lower Fall River
Upper Chilson
Middle/Lower Chilson
Ore Bodies
Lower Fall River
Upper Chilson
Middle/Lower Chilson
Possible Step Rate Test Location
Wellfields for which AE approval will be determined as part of the Final Permit decision after considering responses received from request for comments on the two proposed options.
Possible Locations for Burdock Area Step Rate Test along Perimeter Monitoring Well Ring for Burdock Wellfield 1
N

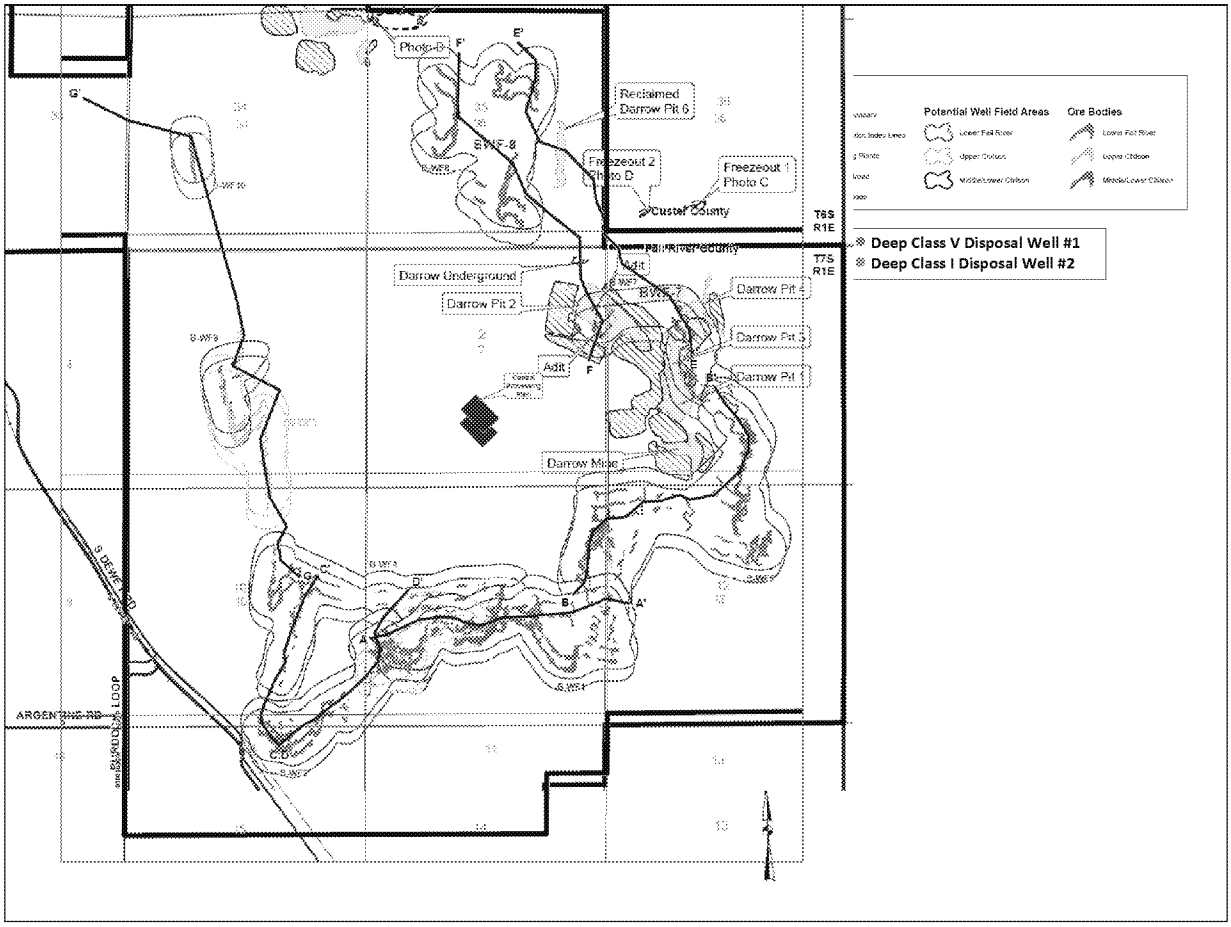


Photo B
Reclaimed Darrow Pit 6
Freezeout 2 Photo D
Freezeout 1 Photo C
Custer County
Fall River County
T6S R1E
T7S R1E
Deep Class V Disposal Well #1
Deep Class I Disposal Well #2
Potential Well Field Areas
Ore Bodies
Darrow Underground
Darrow Pit 2
Adit
Darrow Pit 4
Darrow Pit 3
Darrow Pit 1
Darrow Mine
ARGENTINE RD
S DEMPSEY RD
SANDOZ LOOP

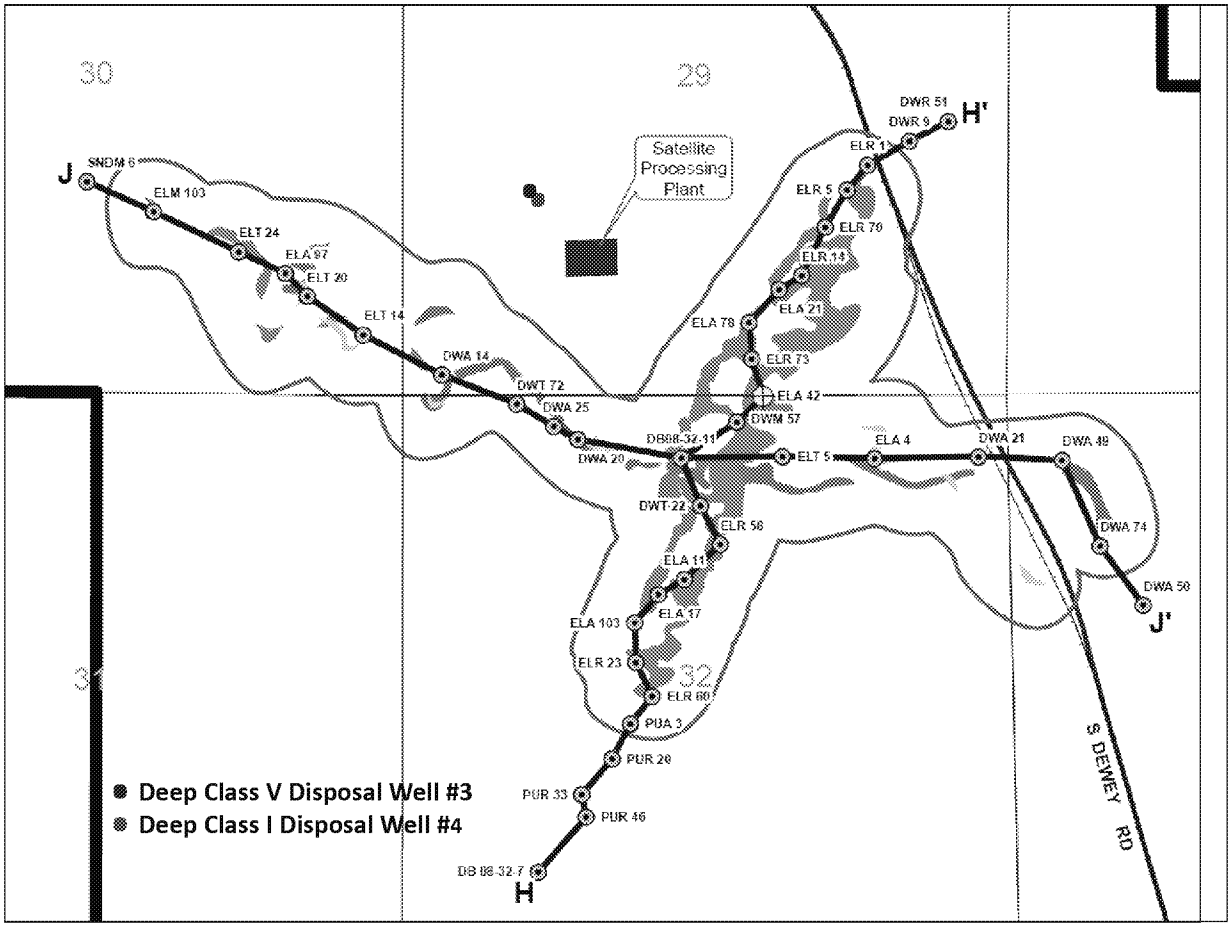


Figure 5a cross sections showing drill holes

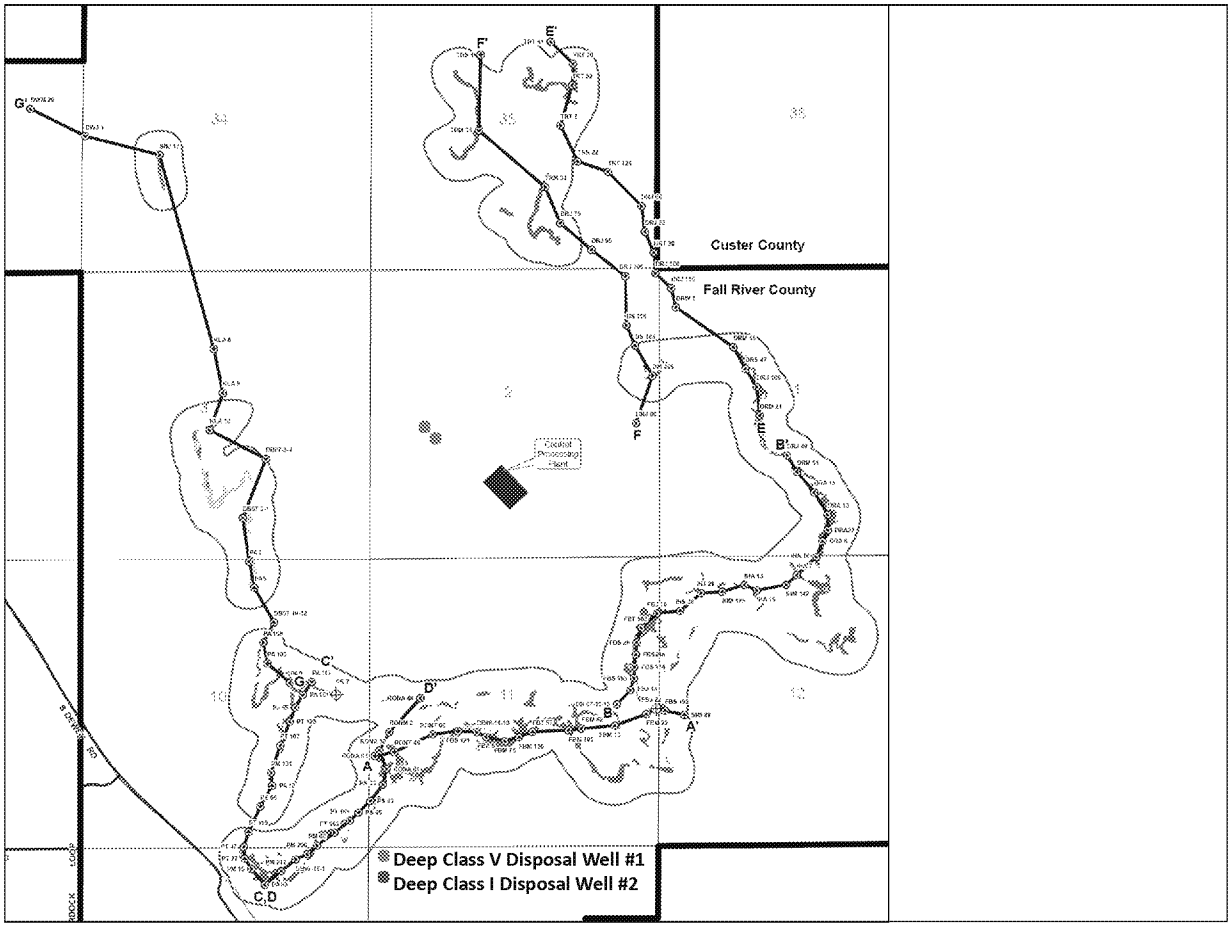
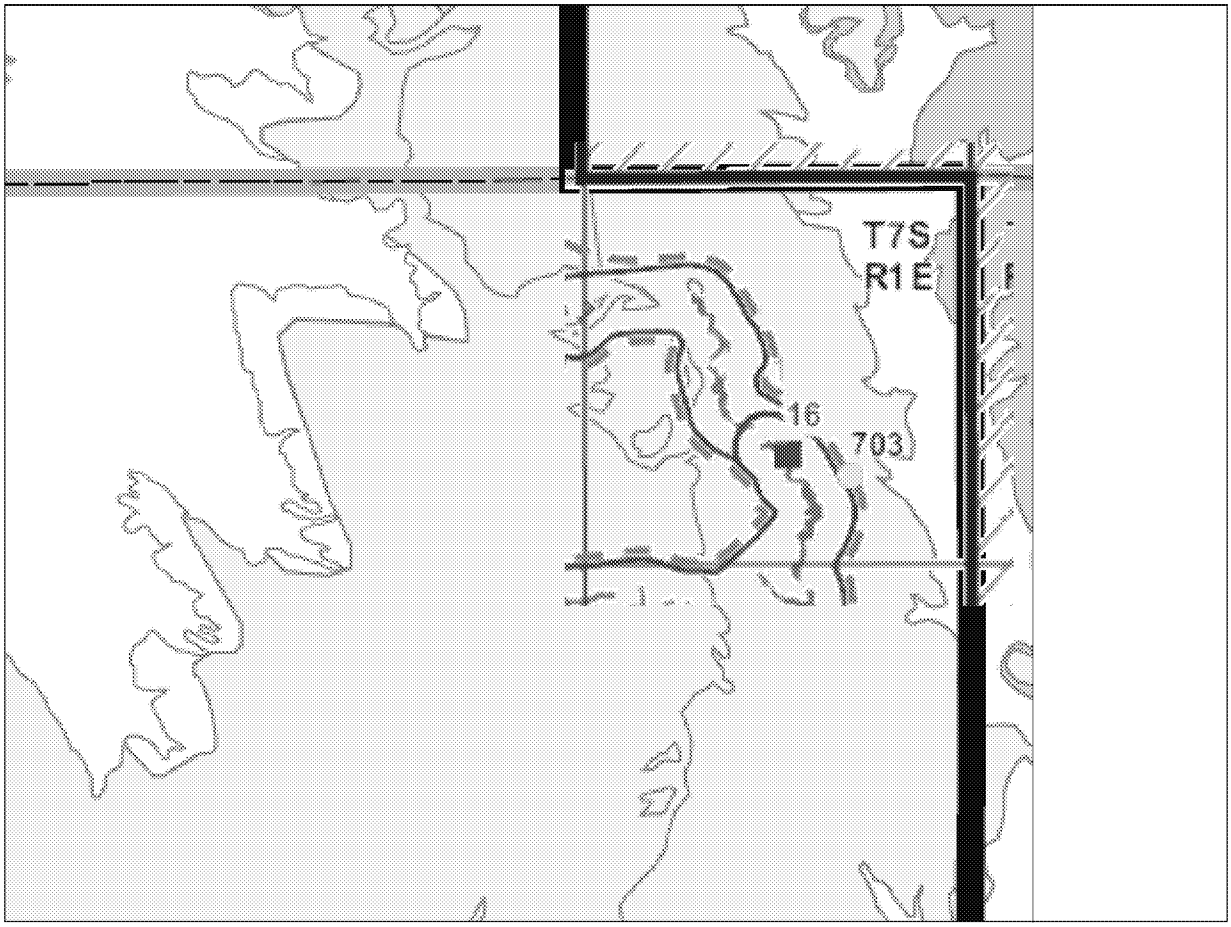
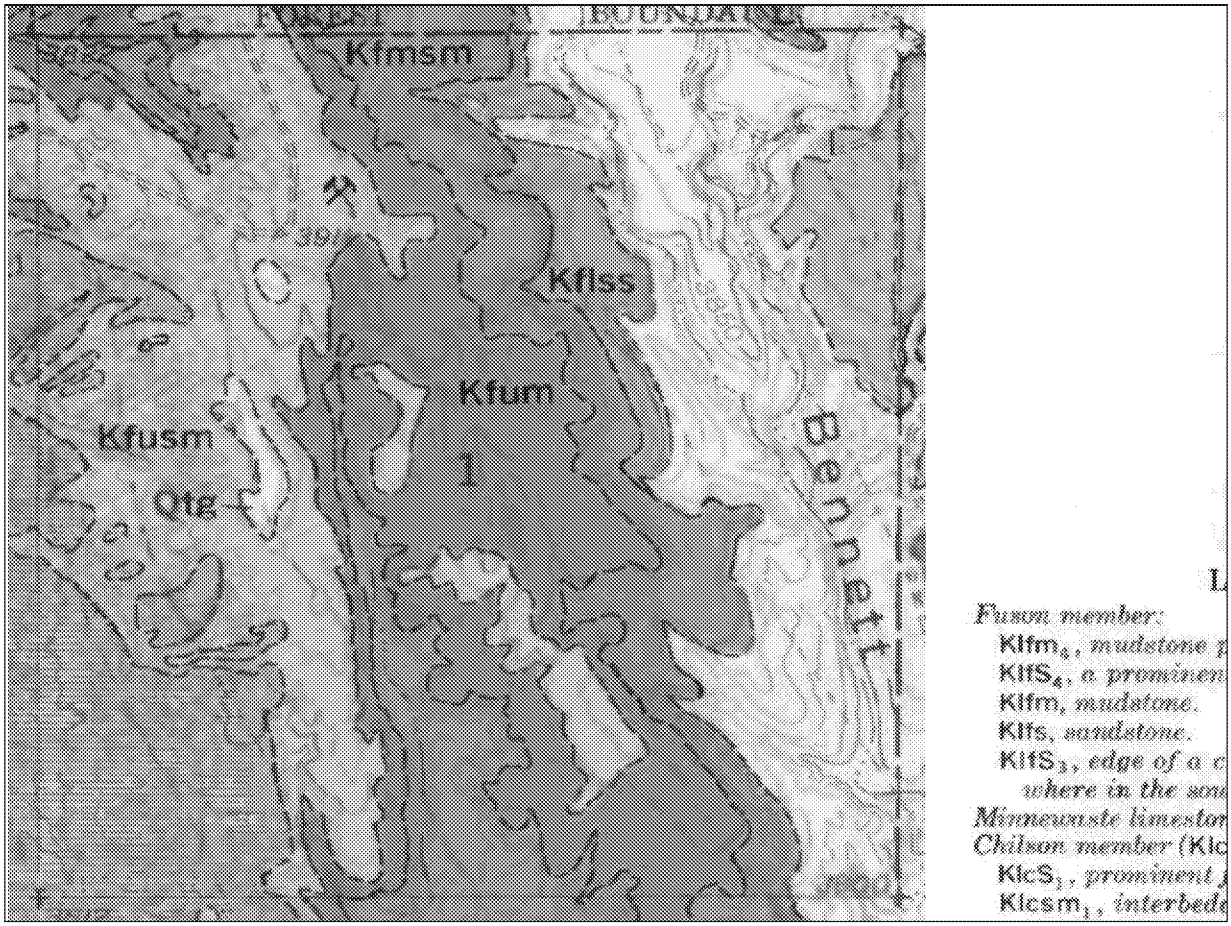


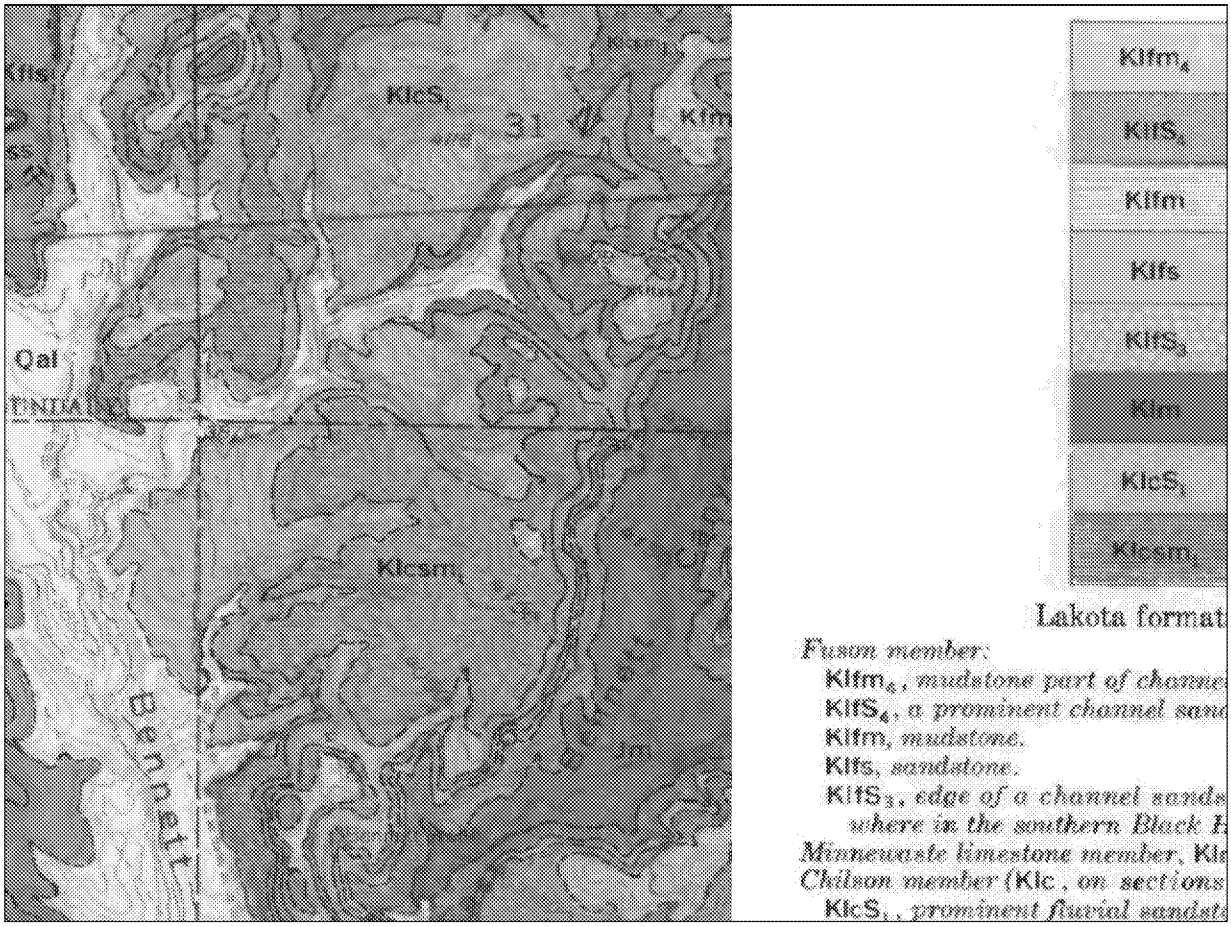
Figure 5b cross sections showing drill holes



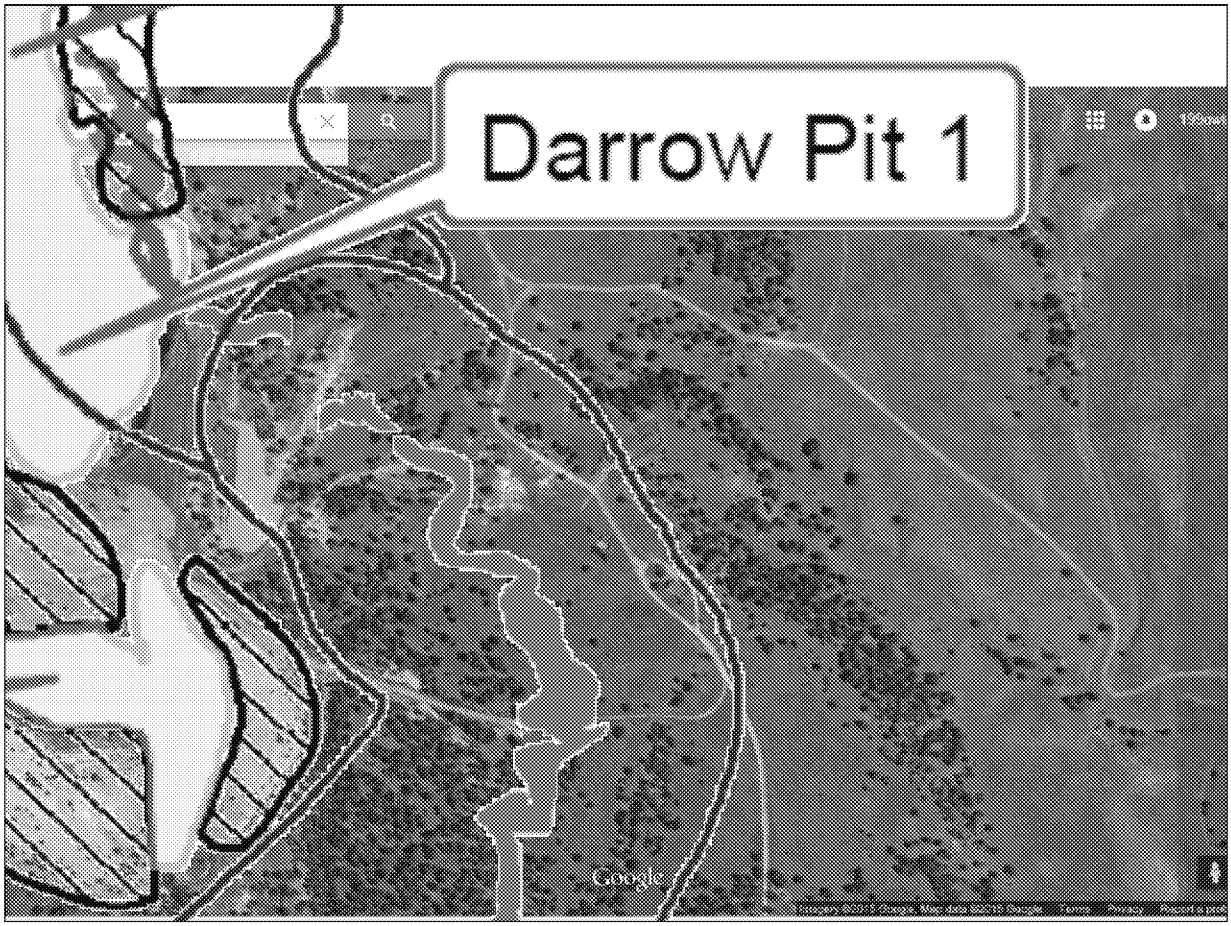
This map shows Lakota outcrop in the NE quarter of Section 1.



The Burdock Geologic Quad shows the Lakota subunit. The next slide confirms that it is the Chilson Sandstone that outcrops in Section 1.



This portion of the Burdock geologic quad shows that Chilson Sandstone that outcrops in the NE corner of Section 1


Darrow Pit 1
Google

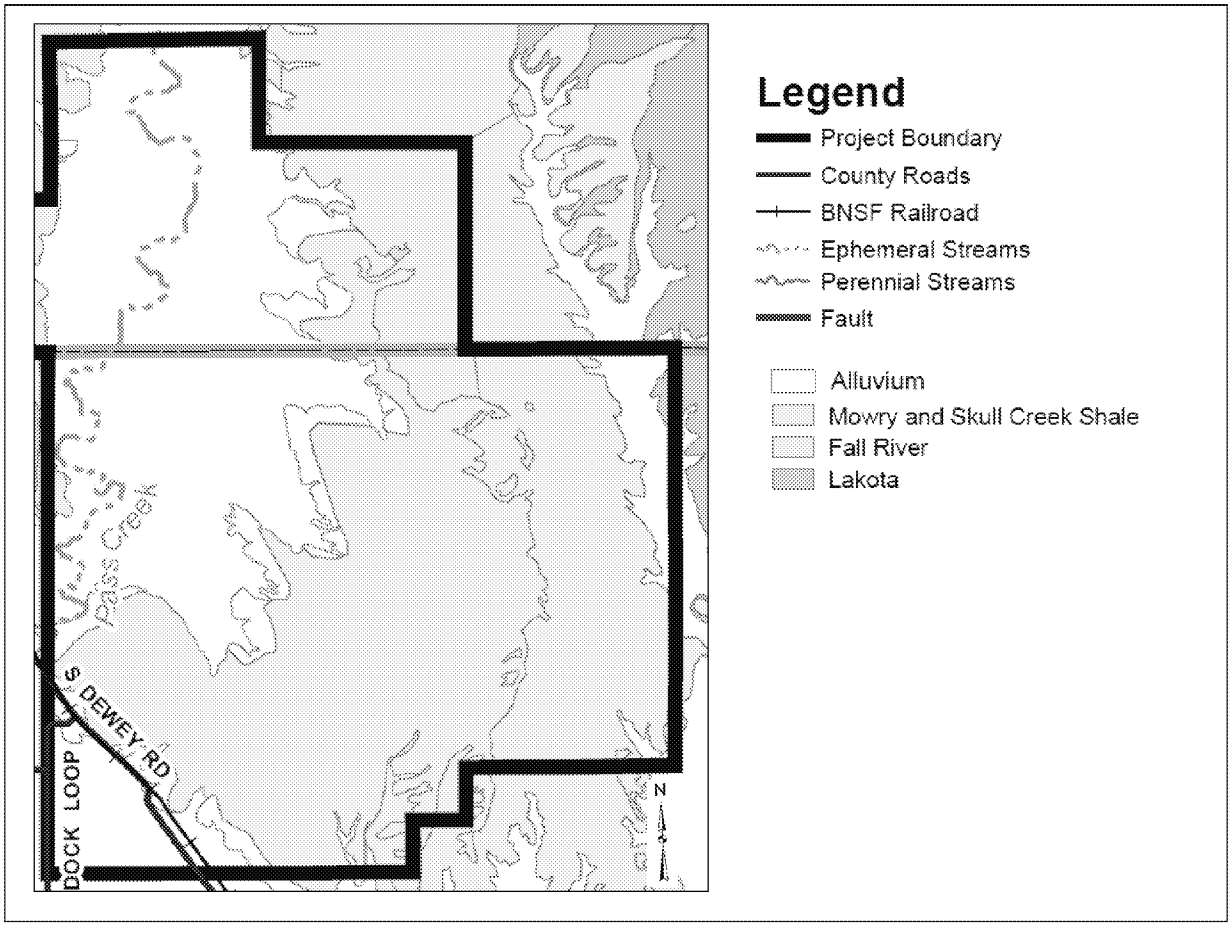
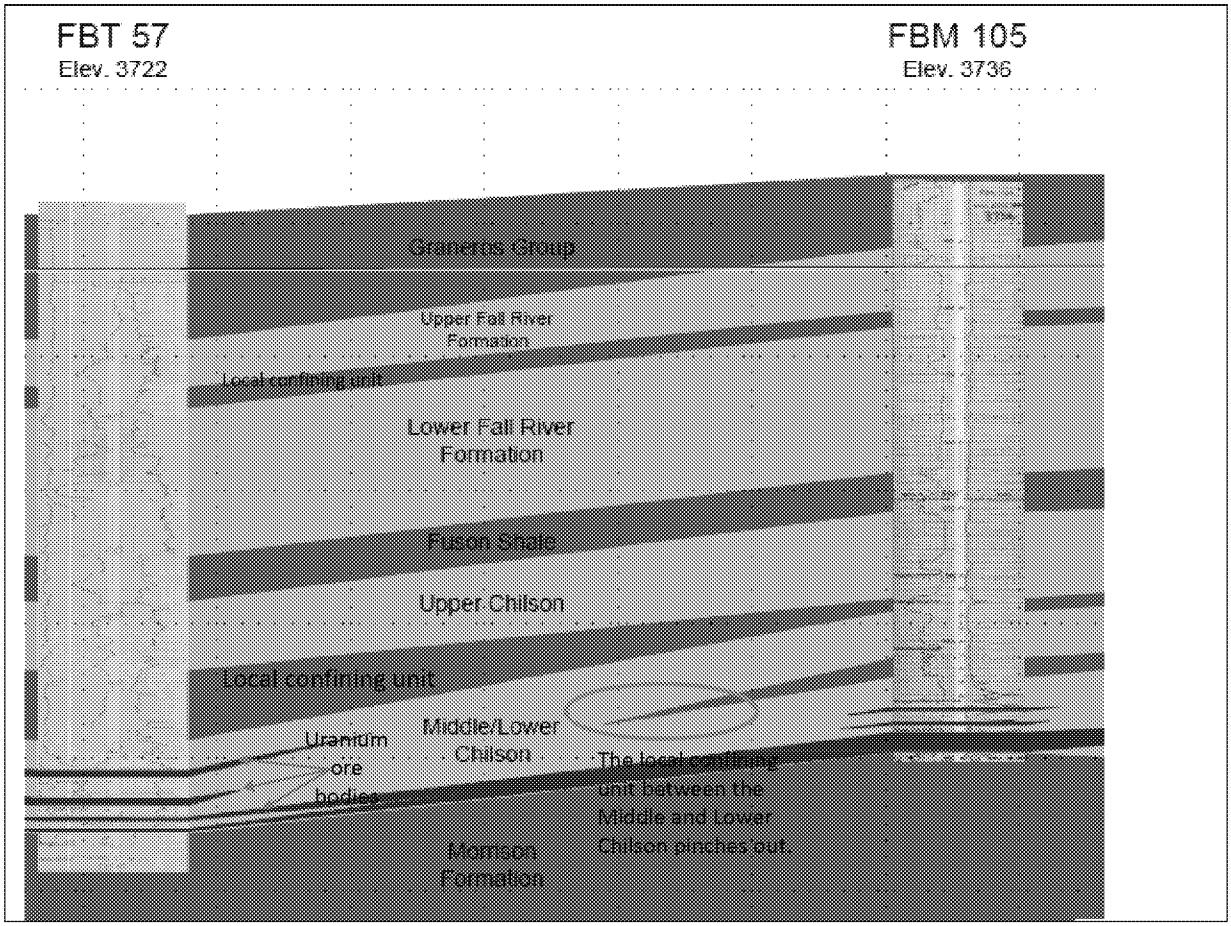
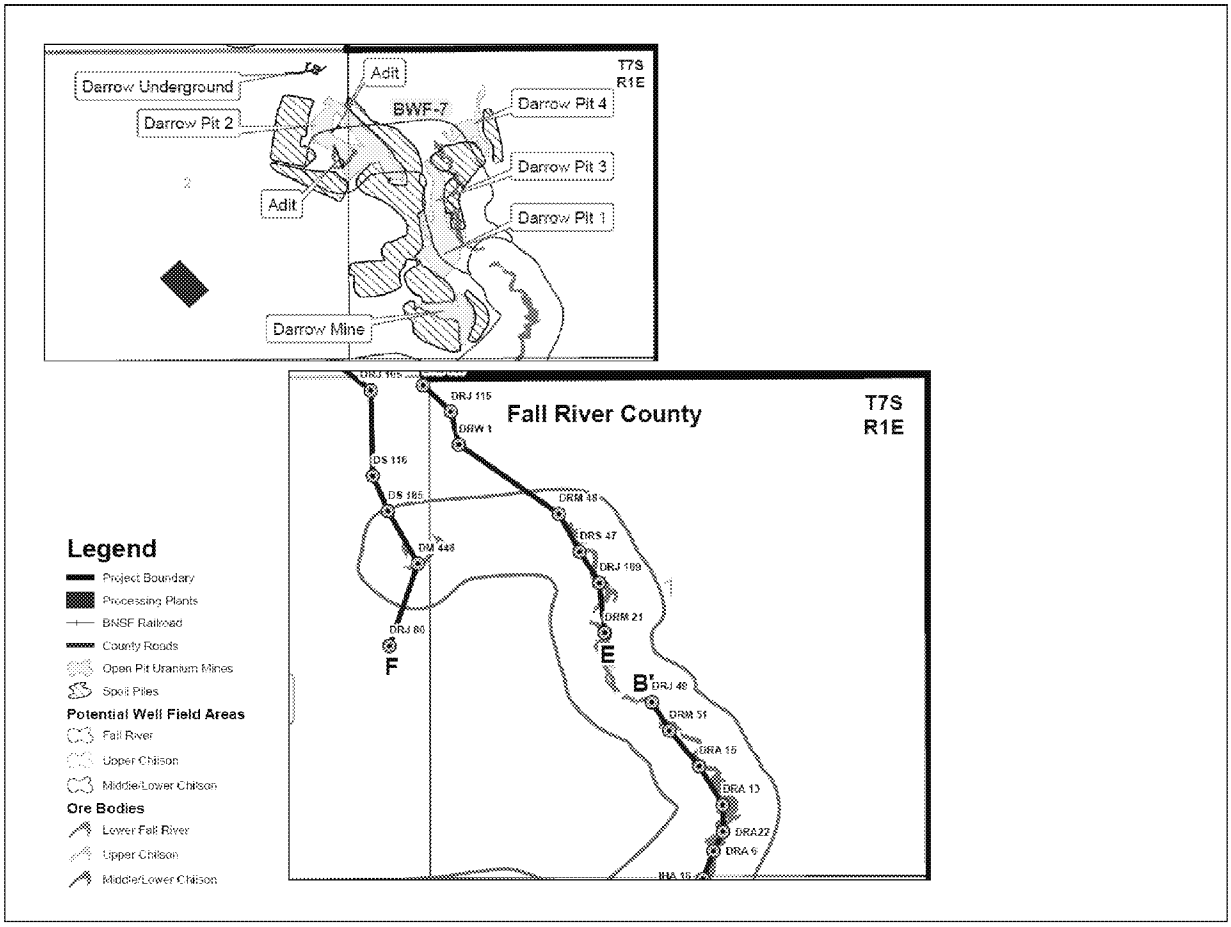
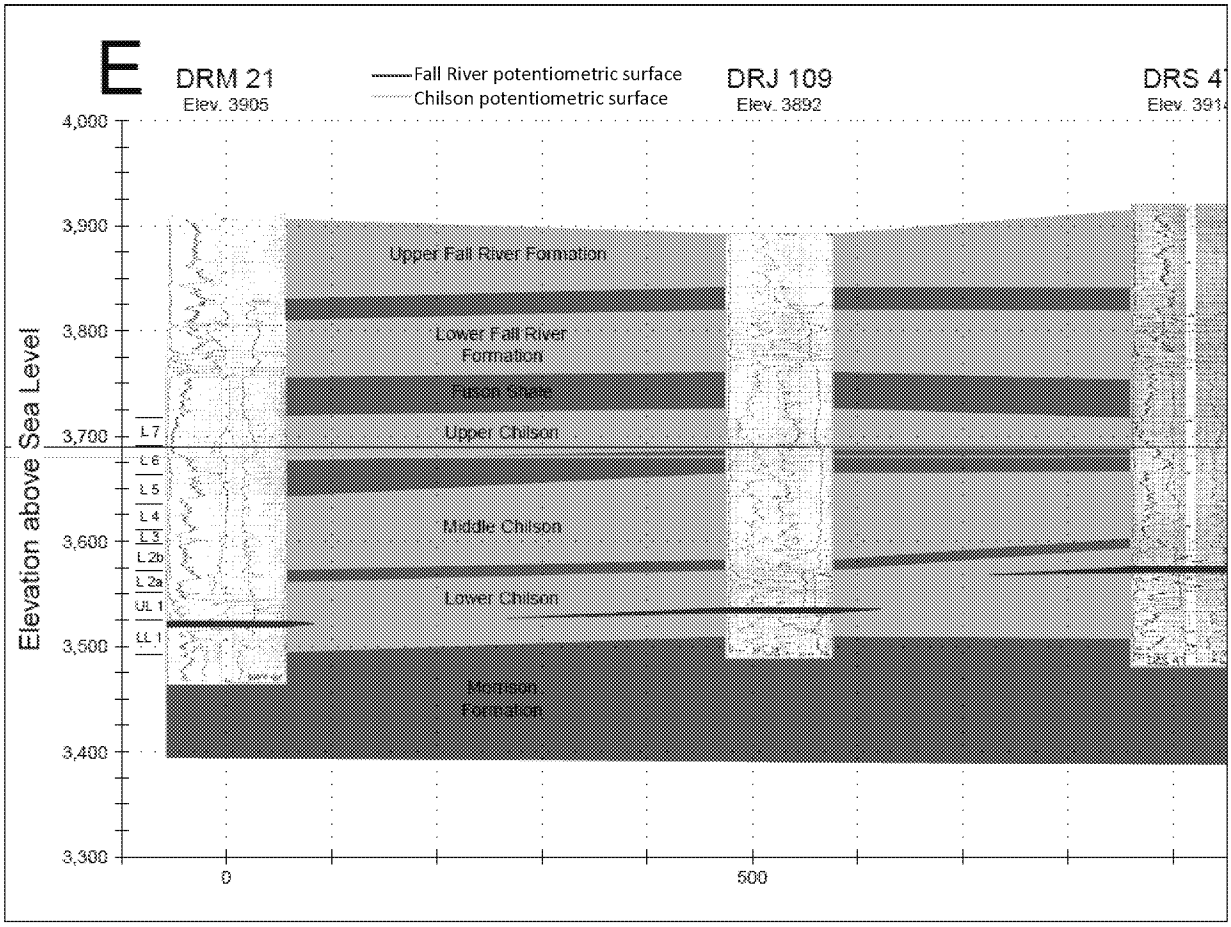


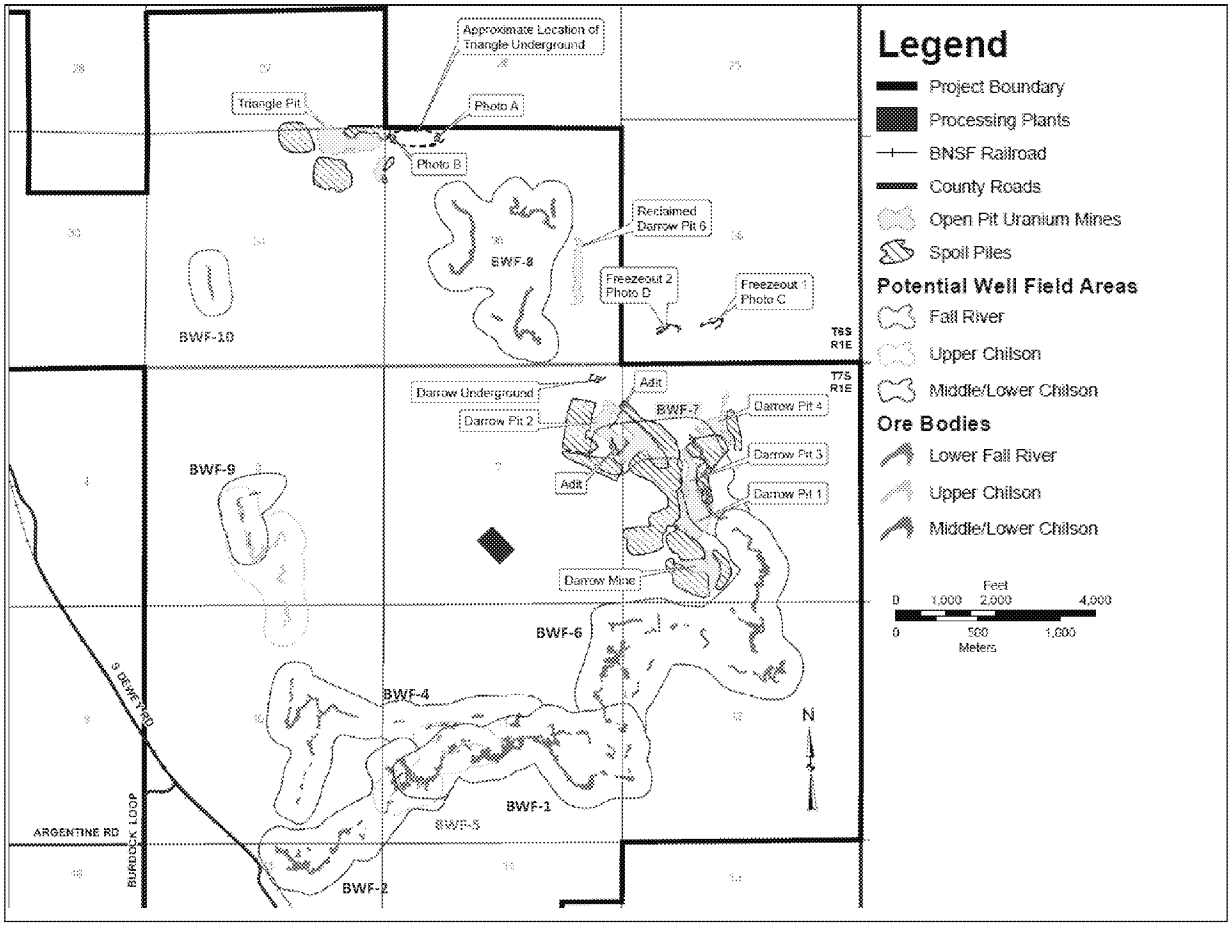
Figure 6. Map showing surface geology in the Burdock Area. Note the light blue Fall River Formation outcrop along the eastern border of the Project Site.

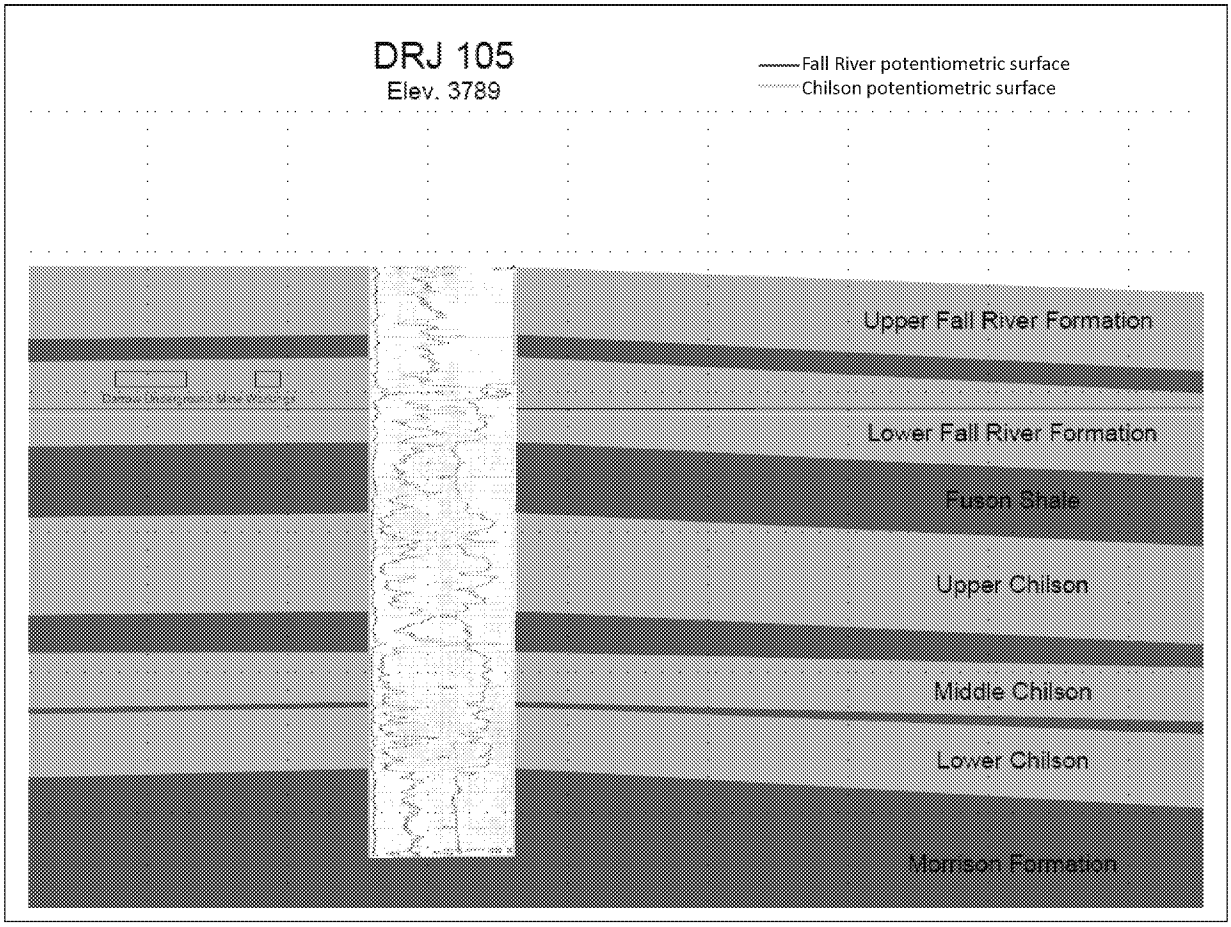

FBT 57
Elev. 3722
FBM 105
Elev. 3736
Graneros Group
Upper Fall River Formation
Local confining unit
Lower Fall River Formation
Fuson Shale
Upper Chilson
Local confining unit
Middle/Lower Chilson
Uranium ore bodies
The local confining unit between the Middle and Lower Chilson pinches out.
Morrison Formation


Darrow Underground
Adit
T7S
R1E
Darrow Pit 2
BWF-7
Darrow Pit 4
Darrow Pit 3
Adit
Darrow Pit 1
Darrow Mine
Fall River County
T7S
R1E
DRJ 115
DRW 1
DS 116
DS 185
DRM 48
DRS 47
DRJ 109
DRM 21
DM 448
DRJ 80
F
E
B'
DRJ 49
DRM 51
DRA 15
DRA 13
DRA22
DRA 6
Legend
Project Boundary
Processing Plants
BNSF Railroad
County Roads
Open Pit Uranium Mines
Spoil Piles
Potential Well Field Areas
Fall River
Upper Chilson
Middle/Lower Chilson
Ore Bodies
Lower Fall River
Upper Chilson
Middle/Lower Chilson

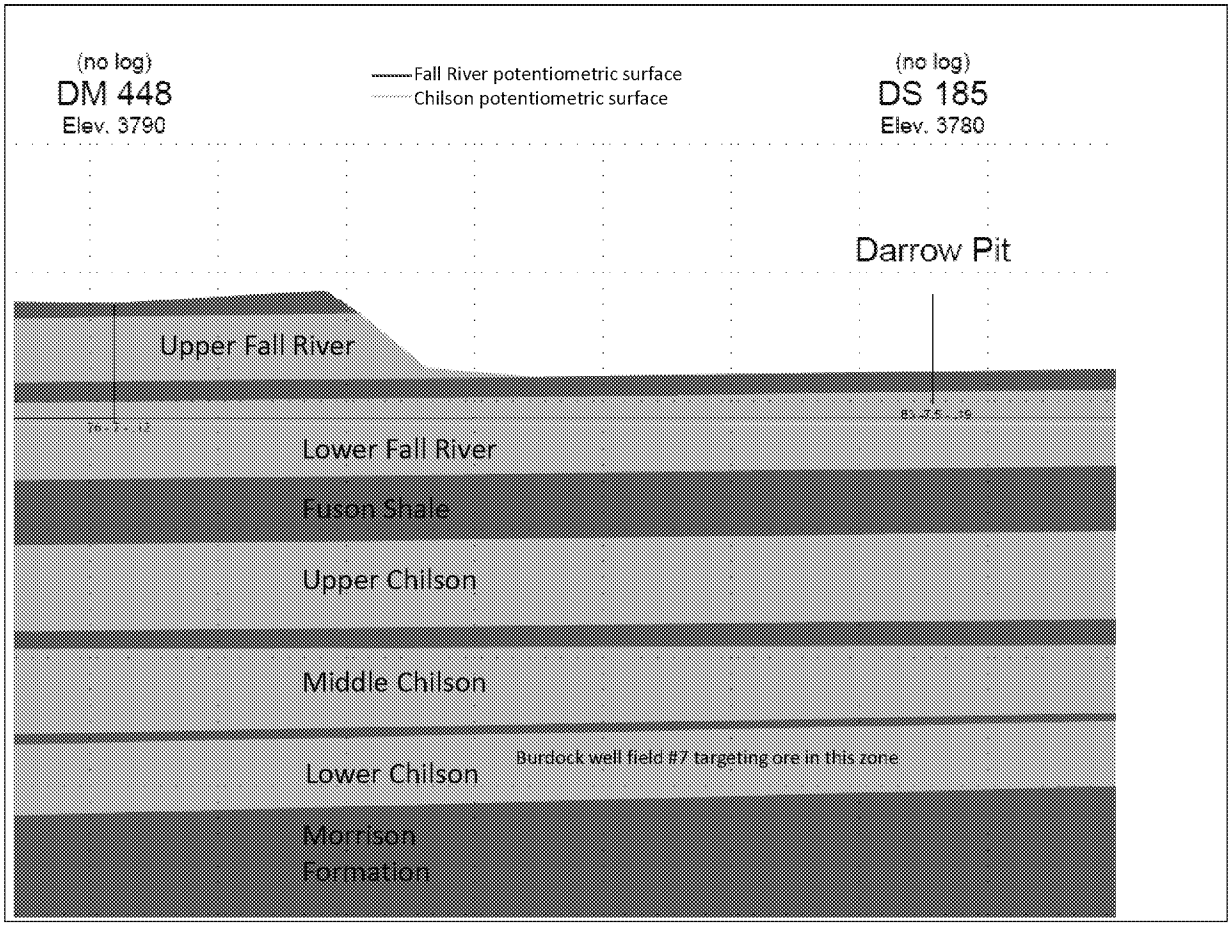


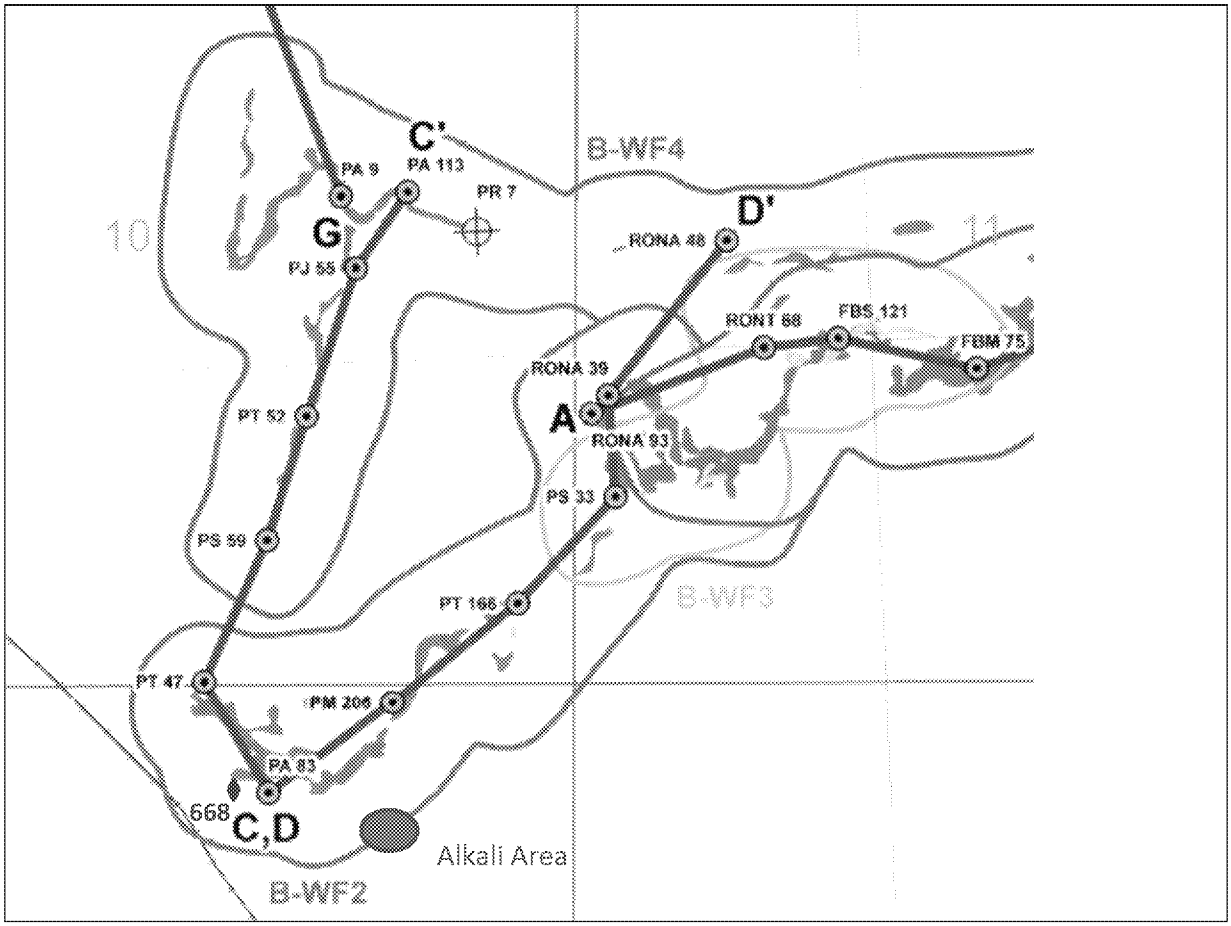
Cross section E-E' south end in B-WF7. Uranium ore in Lower Chilson.
Chilson potentiometric surface at base of Upper Chilson here.
Fuson Shale and 2 local confining units between Fall River Formation and Lower Chilson

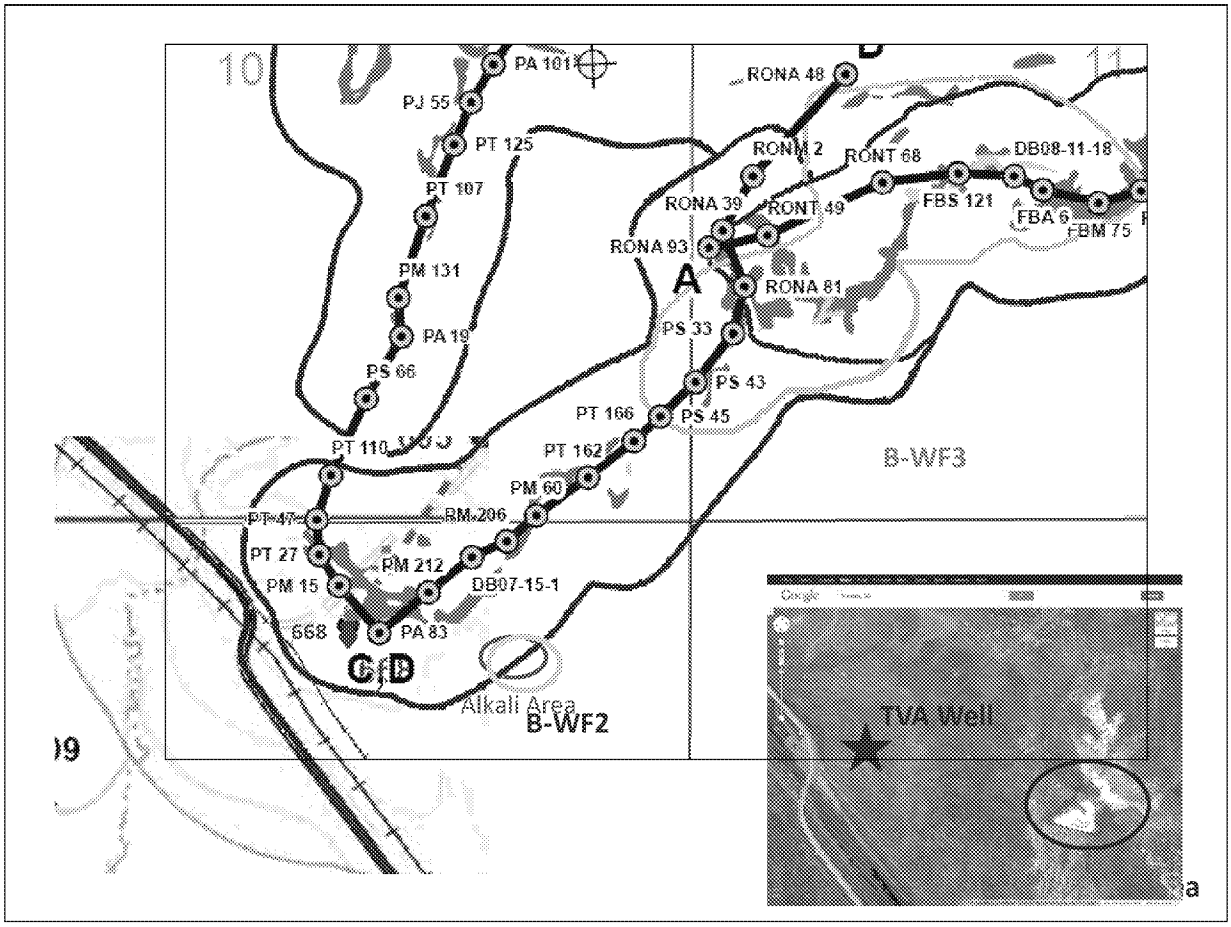

Approximate Location of Triangle Underground
Triangle Pit
Photo A
Photo B
Reclaimed Darrow Pit 6
BWF-8
Freezeout 2 Photo D
Freezeout 1 Photo C
BWF-10
T8S R1E
T7S R1E
Darrow Underground
Adit
Darrow Pit 2
BWF-7
Darrow Pit 4
Darrow Pit 3
Adit
Darrow Pit 1
BWF-9
Darrow Mine
BWF-6
BWF-4
S DEMERS RD
BURDOCK LOOP
ARGENTINE RD
BWF-5
BWF-1
BWF-2
N
Legend
Project Boundary
Processing Plants
BNSF Railroad
County Roads
Open Pit Uranium Mines
Spoil Piles
Potential Well Field Areas
Fall River
Upper Chilson
Middle/Lower Chilson
Ore Bodies
Lower Fall River
Upper Chilson
Middle/Lower Chilson
Feet
0 1,000 2,000 4,000
0 500 1,000
Meters

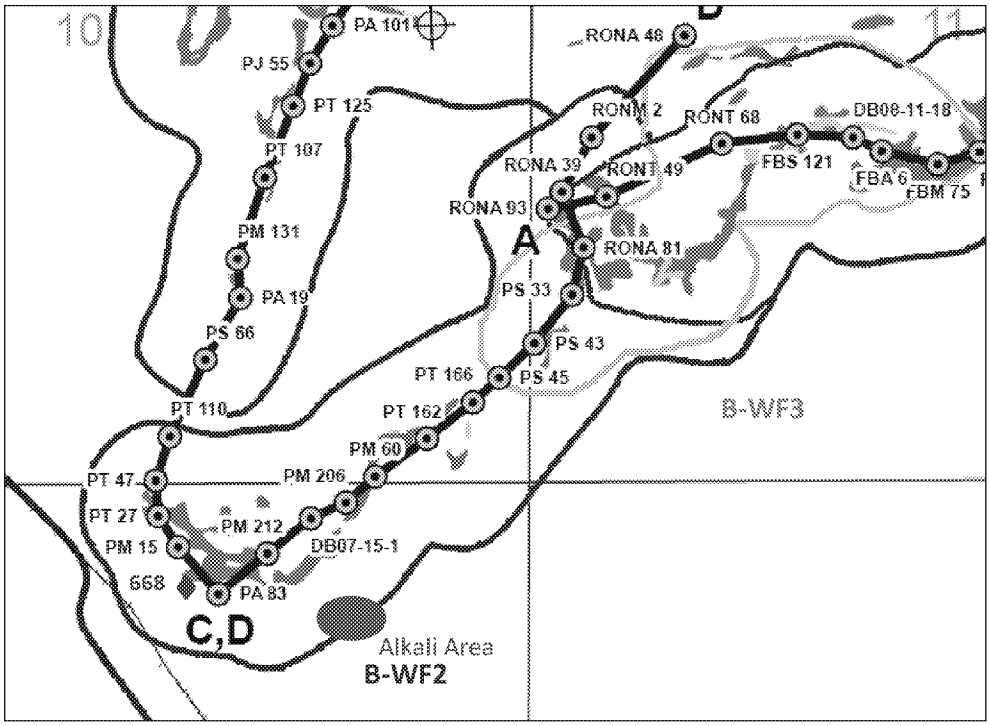


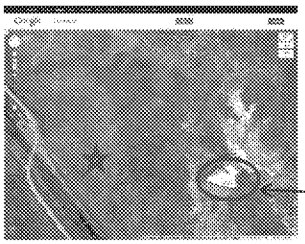
Cross section F-F' north of B-WR7


(no log)
DM 448
Elev. 3790
Fall River potentiometric surface
Chilson potentiometric surface
(no log)
DS 185
Elev. 3780
Darrow Pit
Upper Fall River
Lower Fall River
Fuson Shale
Upper Chilson
Middle Chilson
Lower Chilson
Burdock well field #7 targeting ore in this zone
Morrison
Formation


C'
B-WF4
PA 9
PA 113
PR 7
D'
10
G
RONA 48
11
PJ 55
RONT 58
FBS 121
FBM 75
RONA 39
A
PT 52
RONA 93
PS 33
PS 59
B-WF3
PT 166
PT 47
PM 205
PA 83
668
C,D
Alkali Area
B-WF2

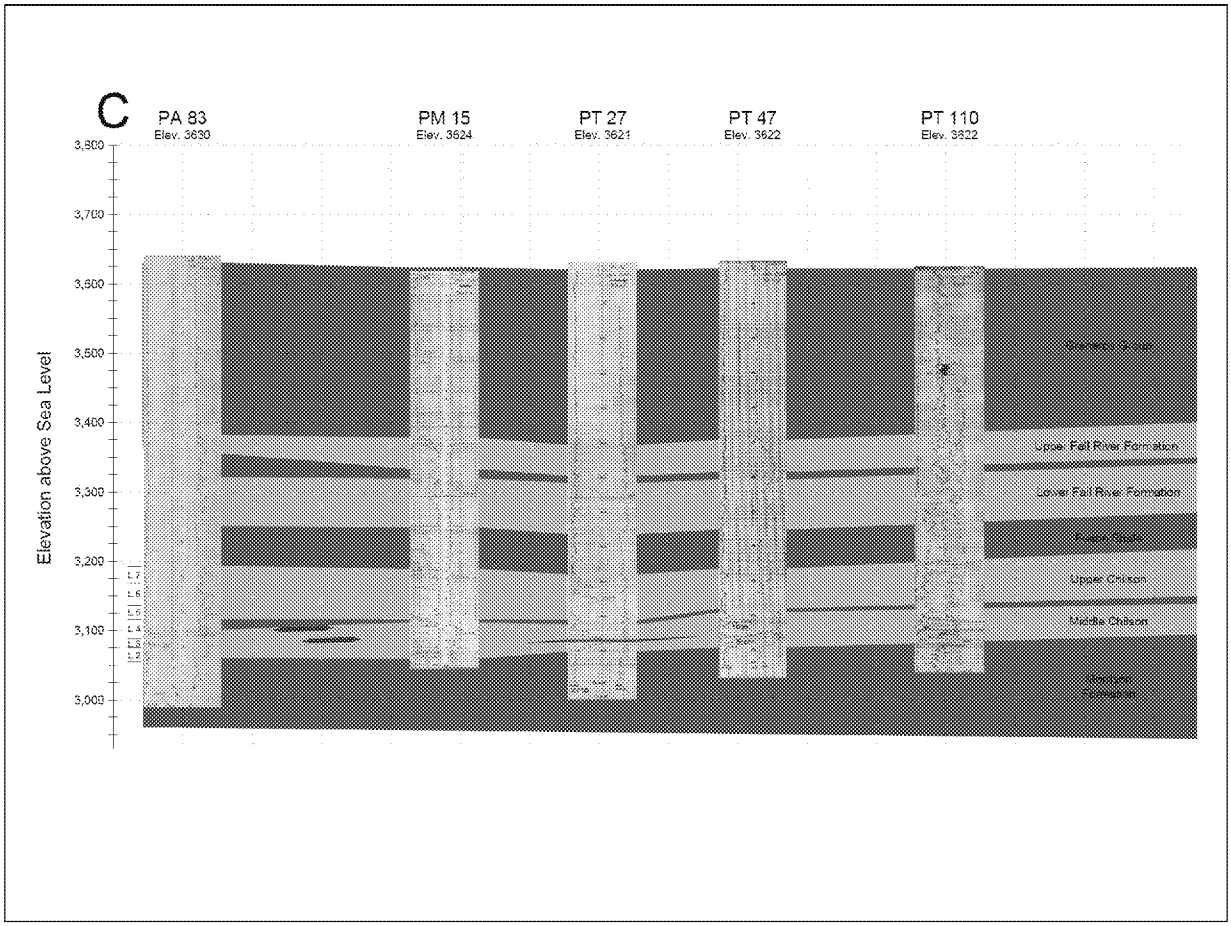

10
11
PA 101
PJ 55
PT 125
PT 107
PM 131
PA 19
PS 66
PT 110
PT 47
PT 27
PM 15
668
PA 83
PM 212
DB07-15-1
BM-206
PM 60
PT 162
PT 166
PS 45
PS 43
PS 33
RONA 81
RONA 93
RONA 39
RONM 2
RONA 48
RONT 49
RONT 68
FBS 121
DB08-11-18
FBA 6
FBM 75
A
B
C
D
B-WF3
B-WF2
Alkali Area
TVA Well


10
11
PA 101
PJ 55
PT 125
PT 107
PM 131
PA 19
PS 66
PT 110
PT 47
PT 27
PM 15
668
PA 83
C,D
PM 212
DB07-15-1
PM 206
PM 60
PT 162
PT 166
PS 45
PS 43
PS 33
RONA 81
A
RONA 93
RONA 39
RONT 49
RONM 2
RONA 48
RONT 68
FBS 121
DB08-11-18
FBA 6
FBM 75
B-WF3
Alkali Area
B-WF2

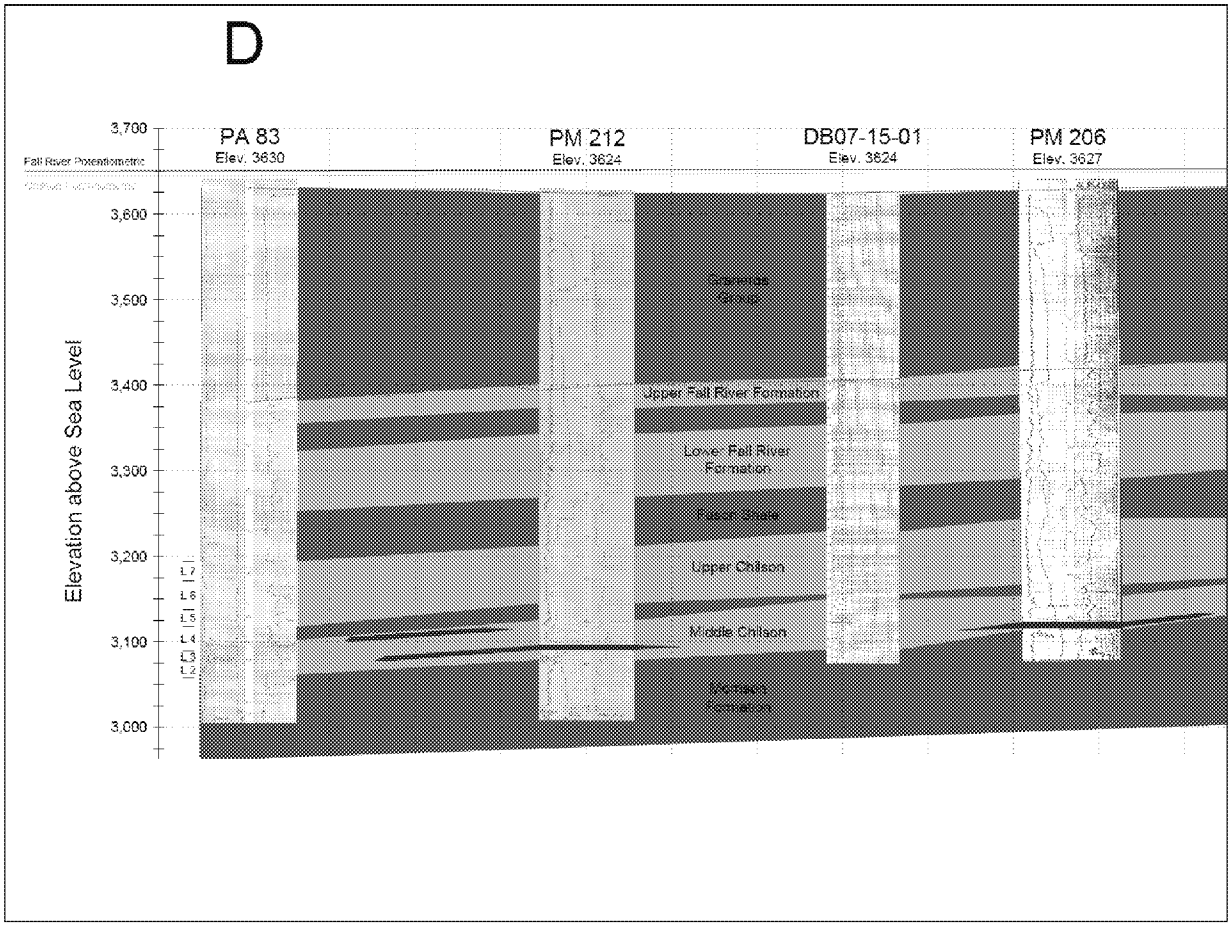


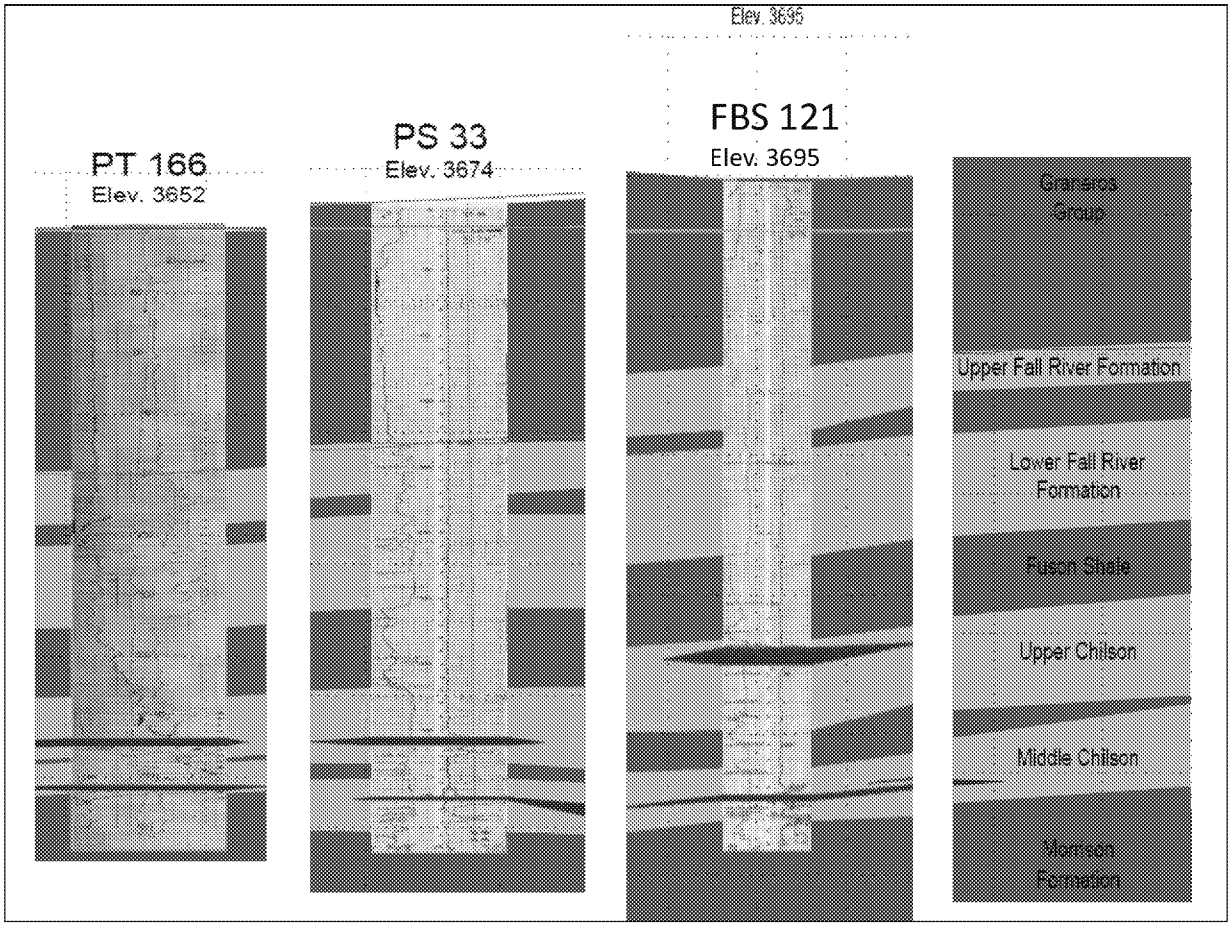
Alkali area

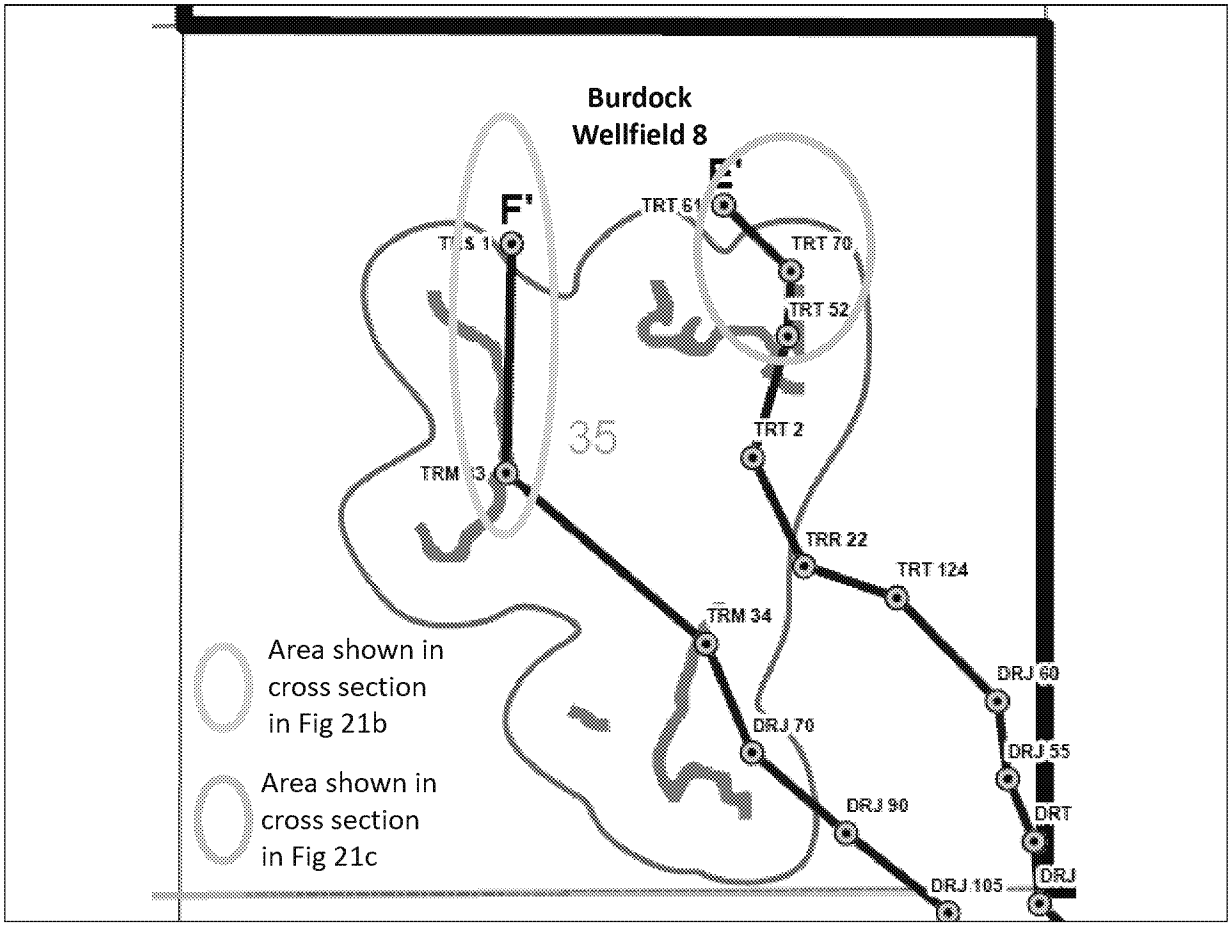
★ Approximate location of well 668



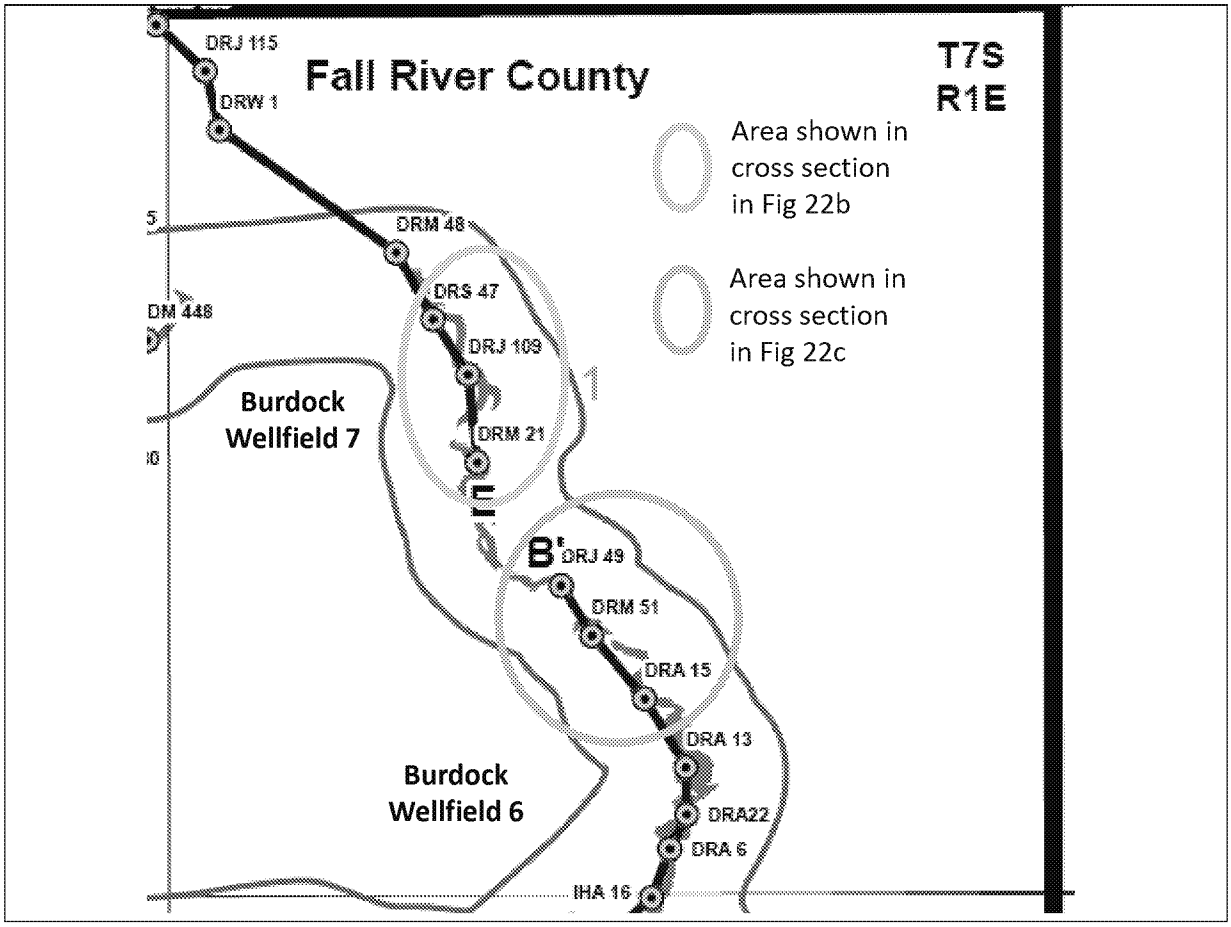
SOB figure 8 showing south end of cross section in Burdock well field #2


D
PA 83
Elev. 3630
PM 212
Elev. 3624
DB07-15-01
Elev. 3624
PM 206
Elev. 3627
Fall River Potentiometric
3,700
3,600
3,500
3,400
3,300
3,200
3,100
3,000
Elevation above Sea Level
Upper Fall River Formation
Lower Fall River Formation
Upper Chilson
Middle Chilson


Elev. 3695
PT 166
Elev. 3652
PS 33
Elev. 3674
FBS 121
Elev. 3695
Graneros Group
Upper Fall River Formation
Lower Fall River Formation
Fuson Shale
Upper Chilson
Middle Chilson
Morrison Formation



Fact Sheet Figure 21a



Fact Sheet Fig 22a