WESTBAY
WELL SUMMARY

Location ID: ST-6 Field Representative(s): Russell, Giles, Pearson, Egan

Purpose of Well: Deep Multi-port Westbay Point of Compliance well: Drilled to fulfill RFI/CMS objectives.

Date Started: 07/08/97 Date Completed: 10/05/97

Northing: 229172.66 Easting: 398955.05

Brass Cap: 4465.72 Outer Casing: 4467.34 Inner Casing: 4467.31

Drilling Method: Mud Rotary Drilling Contractor: Stewart Bros.

Driller: V. Amaro

Total Depth Borehole: 1010' Total Depth 4" SS Well Casing: 1000' (4")

Total Depth Surface Casing: 40' Total Depth Westbay Casing 995'

Diameter Well Casing: 1.5" Westbay Casing Set inside 4" stainless steel casing Diameter Surface Casing: 10 3/4 "

Water Producing (packed-off) Intervals:	527'	to	537'	(depths of 4" stainless steel screens)
Water Producing (packed-off) Intervals:	568'	to	578'	"
Water Producing (packed-off) Intervals:	678'	to	688'	"
Water Producing (packed-off) Intervals:	824'	to	834'	"
Water Producing (packed-off) Intervals:	970'	to	980'	"

Water Detected: not detected while drilling Water Level Open Borehole: not recorded

Water Level Cased Borehole: ≈ 400'

Estimated Water Use: ≈ 21,000 gallons

Westbay Well Casing:

1.5 in x 2 ft SCD 80 PVC:	1	=	2	ft
1.5 in x 5 ft SCD 80 PVC:	9	=	45	ft
1.5 in x 10 ft SCD 80 PVC:	89	=	890	ft
Total SCD 80 PVC pipe:			937	ft

5 ft MP packer:	12	=	60	ft
Regular coupling:	95			
Pumping port coupling:	5			
Measurement port coupling:	10			
End cap:	1			
Casing Clamp:	0			
Magnetic collar:	5			

4" Stainless Steel Well Casing:

4" x 20' SCD 10 SS	26	=	520	ft
4" x 10' Extra Strength Screen (0.02 slot)	2	=	20	ft
4" x 10' Extra Extra Strength Screen (0.02 slot)	3	=	30	ft
4" x 10' SCD 10 SS	3		30	ft
4" x 5' SCD 10 SS	2		10	ft
4" x 20' SCD 5 SS	19	=	380	ft
4" x 10' SCD 5 SS	1	=	10	ft
4" x 5' SCD 5 SS	1	=	5	ft
4" SS Endcap	1			
4" SS locking cap	1			
TOTAL			1,005	ft

Well Completion:

100# bags 70/30 sand:	25	bags
100# bags 10/20 sand:	120	bags
Benseal (for plugs)	3	bags
94# bags cement:	90	bags
50# bentonite powder:		bags

Surface Casing:

94# bags cement:	16	bags
50# bags bentonite powder:		bags

Pertinent Field Notes: For more details, refer to Field Notebook #2, pgs. 25 - 95, Book #3, pgs. 1-8, Book #4, pgs. 27 & 28, Book #5, pgs. 1 - 5.

7/8/97	Mobilized to well pad. Mixed mud. - M. Russell.
7/9/97	Drilled 8 3/4" pilot hole to 40'. Reamed hole with 14 7/8" bit. Set 10 3/4" surface casing to 40'. Cemented annulus to surface. - G. Giles.
7/10/97	Drilled 9 7/8" borehole to 310' with mud. Average drilling rate ≈ 35'/hr. - J. Pearson.
7/11/97	Continued drilling with mud, 310' - 600' (290' total). Average drilling rate ≈ 32'/hr. - P. Egan.
7/12/97	Drilled 600' - 870' with mud. - M. Russell.
7/13/97	Drilled 870' to 1010'. 2 geophysical logs done. - J. Pearson.
7/14/97	Designed 4" SS well and installed 836' of 1000' of casing. - P. Egan.
7/15/97	Finished installing casing. Pulled ~ 1/2 to make sure schedule 5 was in correct locations. - M. Russell.
7/16/97	Having much difficulty installing annular material through tremy. - M. Russell.
7/17/97	Completed annulus in well from 918' to 811'. We coated the borehole with low viscosity mud from 811' to surface at the end of the day to keep borehole open during 4-day break. - G. Giles.
7/22/97	Continued to install backfill materials. - M. Russell.
7/23/97	Installed completion materials around last 2 screens (#'s 4 & 5), filler sand to 30' above SWL, and first load of grout. Checked for grout invasion with bailer. No grout in well. - P. Egan.
7/24/97	Rig mobilizes to IS-1 after pouring 2nd grout load. - J. Pearson.
7/25/97	Start development of 4" casing by using a sand pump to remove sediment from bottom of casing.- P. Egan.
7/26/97	Continue development with sand pump. - T. Hall.
7/27/97	Continue development with sand pump. - T. Hall.
7/28/97	Prepared for development with swabs and straddle packers. - P. Egan.

7/29/97	Due to poor swab cups, could pull very little water. What did come up was dirty/rusty. - M. Russell.
7/30/97	Finished swabbing uppermost screen 527' - 537'. Removed ≈ 585 gallons from this screened interval. Moved to next screen 568' - 578' and began swabbing. - P. Egan.
7/31/97	Finished swabbing screen #2 (568' - 578'). Move to screen #3 (678' - 688'). - M. Russell.
8/5/97	Finished swabbing screen #3 and #4 (824' - 834'). M. Russell.
8/6/97	Swabbed lowest screen #5 (970' - 980') and removed 405 gallons. - P. Egan.
8/7/97	Pulled packer assembly and installed 4" submersible pump in top screen. - J. Pearson.
8/8/97	Develop with submersible pump screens #1, 2, and 3 to below 5 NTUs. - P. Egan.
8/9/97	Same on screens 4 and 5. - J. Pearson.
8/10/97	Same, screens 4, 3, 2 and 1. - M. Russell.
8/11/97	Tripped out of hole, cleaned up, and secured site. Pulling unit left on site. - G. Giles.
10/1/97	Unsuccessful in trying to install WB casing. 3' of sediment in 4" ss conventional well. - M. Russell.
10/2/97	Pulled WB casing from 4" ss well and modified design of WB well. - G. Giles.
10/3/97	Installed 995' of WB casing. - G. Giles.
10/4/97	Inflated 9 of 12 packers. - J. Pearson.
10/5/97	Inflated last 3 packers for WB well completion. - M. Russell.