

WELL SUMMARY

Location ID: PL-4-464 Field Representative(s): G. Contaldo

Date Started: 01/03/90 Date Completed: 01/23/90

Northing: 227645.70 Easting: 399612.69

Brass Cap: 4480.88 Outer Casing: 4482.71 Inner Casing: 4483.40

Drilling Method: Mud/Air-Foam Rotary Drilling Contractor: Larjon Drilling

Driller: T. Crawford

Total Depth Borehole: 494.5' Total Depth Well Casing: 479.4'

Total Depth Surface Casing: 55'

Diameter Well Casing: 4" Diameter Surface Casing: 10"

Length of Bottom Blank: 5.00'

Type of Screen: 10' extra strength 0.02 slot

Screen Interval: 463.96' to 474.36'

Water First Detected: 455.0' Water Level Open Borehole: 410.22'

(surface casing)

Water Level Cased Borehole: 412.58' (T.O.C.)

Quik-Foam Use: 15 gallons

E-Z Mud Use: 15 gallons

- Estimated Water Use: 6,100 - Used during drilling
- 1,900 - Used during mud rotary drilling
- 1,120 - Recovered in pit
- 3,080 - Entered formation

Well Casing:

4in x 3ft SCD 40 PVC:	0	stock SS centralizers:	0
4in x 5ft SCD 40 PVC:	0	custom SS centralizers:	1
4in x 10ft SCD 40 PVC:	0	4"x2' SS locking riser:	0
4in x 20ft SCD 40 PVC:	0	4" SS locking cap:	1
Total SCD 40 PVC pipe:	0 ft	4" SS female cap:	1
4in x 3ft SCD 5 SS pipe:	0		
4in x 5ft SCD 5 SS pipe:	0	4in x 5ft SCD 10 SS pipe:	2
4in x 10ft SCD 5 SS pipe:	0	4in x 10ft SCD 10 SS pipe:	0
4in x 20ft SCD 5 SS pipe:	20	4in x 20ft SCD 10 SS pipe:	3
Total SCD 5 SS pipe:	400 ft	Total SCD 10 SS pipe:	70 ft
		10' Extra strength screen	

Well Completion:

100# bags 16/40 sand:	5	bags
100# bags 10/20 sand:	0	bags
100# bags 8/14 sand:	0	bags
100# bags 8/20 sand:	12	bags
100# bags 4/8 sand:	23	bags
94# bags cement:	181	bags
5 gal. buckets bentonite:	0	buckets
50# bentonite powder:	18	bags
Benseal:	1	bags
Sackrete	9	bags

Surface Casing:

94# bags cement:	30	bags
50# bags bentonite powder:	3	bags
Grout:	0	bags

Pertinent Field Notes:

01/03/90 Completed setting-up and mixing mud. Drilled from 0'-22' using mud rotary with 12 1/4" bit. Used 1700 gallons of water and 11 sacks bentonite. - Contaldo

01/04/90 Drilled from 22'-55' using mud rotary with 12 1/4" bit, reamed to 55' with 16" bit. Installed 10" surface casing to 55'. Used 200 gallons of water. - Contaldo

01/05/90 Grouted surface casing. Used 30 sacks cement and 3 sacks bentonite (for PL-4) and 6 sacks cement and 1 sack bentonite (for NASA-Well-PT).

01/08/90 Drilled from 55'-355' using air-foam rotary with 9 7/8" bit. Used 2100 gallons of water. No formation water observed while drilling or blowing borehole. Dropped 55' of drill stem in borehole. - Contaldo

01/09/90 Fished drill stem out of borehole. Tripped back into surface casing. - Contaldo

- 01/20/90 Unplugged float in stabilizer. Drilled from 355' <sup>494.5 ?</sup> (394.5') using air-foam rotary with 9 7/8" bit. Used 2100 gallons of water. Water first detected at 455' while blowing borehole. Quantity of water increased while drilling from 455' to 494.5' (total depth). - Contaldo
- 01/11/90 Loaded casing and sand and brought to well site. Ran full suite of geophysical logs and designed well. Set up to install casing. - Contaldo
- 01/12/90 Sounded bottom of borehole at 485.51'. Installed well casing, screened interval from 463.96' - 474.36', gravel pack from 453.16'-485.5'. Installed upper benseal plug from 446.56'-453.16'. - Contaldo
- 01/15/90 Installed filler sand and poured first load of grout. Used 70 bags cement, 7 bags bentonite, and 619 gallons of water for grout mixture. - Contaldo
- 01/16/90 Installed second load of grout (grout did not reach ground surface). Used 50 bags cement, 5 bags bentonite, and 422 gallons of water. - Contaldo
- 01/17/90 Sounded top of second load of grout at 131' (surface casing). Installed third load of grout and protective outer casing. Used 60 bags cement, 6 bags bentonite, and 507 gallons of water. - Contaldo
- 01/18/90 Started development. Surged/bailed well, set pump at 467', and discharged 150 gallons of water (total). - Contaldo
- 01/22/90 Completed development. Indicator parameters stabilized after pumping 840 gallons of water. Discharged total of 1140 gallons of water. Well sustained a pumping rate of 10 gpm. - Contaldo
- 01/23/90 Poured concrete pad and set brass cap. - Contaldo