

23334

LOCATION OF BORING

Propane

TANK

JOB NUMBER

CLIENT

LOCATION

06702-086

Tisoro

Kenai AK

DRILLING METHOD:

Air Rotary

Drilltech D25K

10" Steel outer casing 8" inner csg.

BORING NUMBER

T-2A

SHEET

1 of 10

SAMPLING METHOD:

Grab

DRILLING

START

FINISH

TIME

TIME

7:50

22:00

SURFACE CONDITIONS:

Flat sand & gravel fill

DATE

5/28/94

DATE

5/29/94

DATUM

ELEVATION

SAMPLER TYPE

INCHES
DRIVEN
RECOVERED

TIME

SAMPLE
NUMBER
SAMPLE
DEPTHBLOWS/FT.
SAMPLEROVA
AUGER
SAMPLE
CUTTINGSDEPTH
IN FEET

SOIL GRAPH

-Sandy gravel - dry

Dark Brown gravelly SAND, well graded, damp, sand is fine to coarse, slightly weathered, angular to rounded, gravel is rounded, slightly weathered, 15-20% fine gravel, 80-85% f-c sand, <5% fines

Dark Reddish Brown gravelly sand
As Above

gravelly SAND becomes poorly graded

SITE ID

LOCAL NO. SB7-12-22BDBB

NK 26

Dames & Moore

DRILLING CONTRACTOR Hughes/Alpine

35253

BY Mark Ochsner

CHECKED BY

DATE 5/30/94

st

ctgs

8:00

8:10

GW
SWGP
SP

20

23334

LOCATION OF BORING	JOB NUMBER	CITY	LOCATION
	06702-006	Tesoro	Kunai Ak
	DRILLING METHOD:		BORING NUMBER
	See page 1		T-2A
	SAMPLING METHOD:		SHEET
		Z of 10	
		DRILLING	
		START	FINISH
		TIME	TIME
		DATE	DATE

See page 1

DRILLING CONTRACTOR Hughes/Alpine

35253

DATUM				ELEVATION			DEPTH IN FEET	SOIL GRAPH
SAMPLER TYPE	INCHES DRIVEN INCHES RECOVERED	TIME	SAMPLE NUMBER SAMPLE DEPTH	BLOWS/FT. SAMPLER	ALGER	OVA SAMPLE CUTTINGS		
							20	
Cgs		9:00					1	GW SW
							2	
							3	
							4	
							5	
							6	
							7	
							8	
		9:10					9	GW SW
							30	
							1	
							2	
							3	
							4	
							5	
		9:20					6	
							7	
							8	
							9	
							40	
							1	

Dark Reddish Brown gravelly SAND, 20-25% fine angular to rounded gravel, 75-80% f-c sand, angular to rounded, slightly weathered, dump, well graded.

Casing drives easily

GRAVELLY SAND AS ABOVE

- Color change to dark olive Gray

SB 7-12-22 BDBB

BY Mark Ochsenr
DATE 5/28/94
CHECKED BY

23334

DRILLING CONTRACTOR Hughes / Alpine

35253

BY Mark G. Chiswick
DATE 5/28/94
CHECKED BY

LOCATION OF BORING										JOB NUMBER		LOCATION	
										06702-086		Tesoro	
										DRILLING METHOD:		BORING NUMBER	
												T-2A	
										SAMPLING METHOD:		SHEET	
												3 of 10	
												DRILLING	
												START	
												TIME	
												FINISH	
												TIME	
												DATE	
												DATE	
DATUM										ELEVATION			
SAMPLER TYPE	INCHES DRIVEN / INCHES RECOVERED	TIME	SAMPLE NUMBER	BLOWS/FT. SAMPLER	OVA			DEPTH IN FEET	SOIL GRAPH	SURFACE CONDITIONS:			
					AUGER	SAMPLE	CUTTINGS						
Clas		9:45						4.0	GP	Dark olive gray gravelly SAND, poorly graded, damp, 25-30% fine rounded gravels, 70-75% f-c angular to rounded sand, slightly weathered			
								1	SP				
								2					
								3					
								4					
								5					
								6					
st		9:50						7	SP	Dark olive gray SAND, poorly graded, damp, 5-10% fine rounded gravel, 5-10% fines, 80-85% f-c Angular to rounded sand, slightly weathered. no odor			
								8		- increase in fines at 49'			
								9					
								5.0					
								1					
								2		cuttings became moist			
								3					
								4					
								5		chunks of blue gray clay : sand at 55.0'			
								6	sm	Blue-gray silty sand, poorly graded, w/occasional fine rounded gravel, 50% f-m sand, 50% fines, moist maybe in water (cased) no odor			
		1000						7					
								8					
								9		- Blowing a little water & sand			
								6.0		cuttings became saturated			
								1					
↓													

See page 1

See page 1

SB 7-1a-2a BDBB

23334

LOCATION OF BORING

JOB NUMBER

06702-086

Tesoro

LOCATION

henai Ak

DRILLING METHOD:

BORING NUMBER

T-2A

SHEET

4 of 10

SAMPLING METHOD:

DRILLING

START

FINISH

TIME

TIME

DATE

DATE

DATUM

ELEVATION

SAMPLER TYPE	INCHES DRIVEN INCHES RECOVERED	TIME	SAMPLE NUMBER SAMPLE DEPTH	BLOWS/FT. SAMPLER	OVA			DEPTH IN FEET	SOIL GRAPH
					AUGER	SAMPLE	CUTTINGS		
								60	SM
ltgs		1040						1	
								2	
								3	
								4	
								5	
								6	
								7	SM
		1100						8	
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SURFACE CONDITIONS:

As Above, saturated, no odor

increase in fines

Blue-gray silty sand, poorly graded, saturated, 25-30 fines, 70-75% fine sand, no odor,

-decrease in water

Blue-Gray silty CLAY, moist, w/ some fine rounded gravel, med stiff, low plasticity, some fine sand in clay.

Blue Gray silty CLAY, moist, stiff, low plasticity, some fine sand, (clay aquitard).

Blue-Gray silty sand, saturated, clumps of moist clay, water-bearing.

Blue-gray silty clay, moist saturated, med. stiff, some v. fine sand, not water-bearing, no odor
12" casing terminated at 80' bgs.

See Page 1

See Page 1

DRILLING CONTRACTOR Hughes/Airline

35253

st

BY Mark Chisner

DATE 5/20/94 CHECKED BY

See page 1

See page 1

23334

LOCATION OF BORING

JOB NUMBER

06792-032

CITY

Tesoro

LOCATION

Kamui Ak

DRILLING METHOD:

BORING NUMBER

T-2A

SHEET

7 of 10

SAMPLING METHOD:

See Page 1

DRILLING

START

FINISH

TIME

TIME

DATE

DATE

DATUM

ELEVATION

SAMPLER TYPE	INCHES DRIVEN INCHES RECOVERED	TIME	SAMPLE NUMBER SAMPLE DEPTH	BLOWS/FT. SAMPLER	OVA			DEPTH IN FEET	SOIL GRAPH
					AUGER	SAMPLE	CUTTINGS		
495		1720						12.0	SP
								1	
								2	
								3	
								4	
								5	
								6	
								7	
								8	SP
								9	
								10	
								11	
								12	
								13.0	
								1	
								2	SP/GP
								3	
								4	
								5	
								6	
								7	
								8	GP
								9	
								10	
								11	SP/GP
								12	
								13	
								14.0	
								1	

SURFACE CONDITIONS:

Blue-gray SAND, pred. f.m rounded sand, occasional fine gravel (rounded) Saturated, 5-10% fines, no odor

8" csg free falls

- increase in fine gravel at 12.8'
stiffer drilling - gravel?

Blue gray sandy Gravel, 40-45% f-c sand, rounded to subrounded, gravel is f-m angular to subrounded 55-60% Saturated, no odor

- increase in f-m rounded gravel.

Blue gray sandy Gravel, poorly graded, saturated, 35-40% f-m rounded sand, 60-65% f-m rounded to well rounded gravel. no odor

Blue-Gray Sandy Gravel, Gravely SAND, Poorly graded, Saturated, 50% f-m subrounded sand, 50% f-m rounded gravel, no odor

Dames & Moore

SB 7-12-22 BDBB

See Page 1

DRILLING CONTRACTOR Hughes/Alpine

35253

st

BY Mark Ochsmier

CHECKED BY

DATE 5/29/94

23334

DRILLING CONTRACTOR HUGHES/ALPINE

35253

BY Mark Knudsen
DATE 5/29 CHECKED BY _____

LOCATION OF BORING										JOB NUMBER 06792-032		CLIENT Tejoro		LOCATION Kenai AK			
See Page 1										DRILLING METHOD:				BORING NUMBER T-2A			
										See Page 1				SHEET 8 of 10			
														DRILLING			
														START TIME	FINISH TIME		
DATUM										ELEVATION				SURFACE CONDITIONS:		DATE	DATE
SAMPLER TYPE	INCHES DRIVEN RECOVERED	TIME	SAMPLE NUMBER SAMPLE DEPTH	BLOWS/FT. SAMPLER	OVA			DEPTH IN FEET	SOIL GRAPH								
					AUGER	SAMPLE	CUTTINGS										
								14.0	SP/GP	Blue gray sandy Gravel AS Above							
								1									
								2									
								3									
								4									
								5									
Chs		1755						6	GP	Dk Gray sandy Gravel, poorly graded, saturated, 25-30% f-m subrounded Sand, 70-75% f-m well rounded gravel							
								7									
								8									
								9									
								10	SP/GP	Blue gray gravelly SAND, saturated, poorly graded, saturated, 25-30% f-m subrounded gravel, 70-75% f-m angular to rounded sand							
								1									
								2									
								3									
								4									
								5									
								6	SP	- less gravel, f-m SAND							
								7									
								8									
								9		- increase in fines (10-15%)							
								10									
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SB 7-12-22, BDBB

23334

LOCATION OF BORING

JOB NUMBER

CI

LOCATION

06792-032

Tejoro

Kenai AK

DRILLING METHOD:

BORING NUMBER

T-2A

SAMPLING METHOD:

See Page 1

SHEET

9 OF 10

DRILLING

START

FINISH

TIME

TIME

DATE

DATE

SURFACE CONDITIONS:

See Page 1

DATUM

ELEVATION

SAMPLER TYPE	INCHES DRIVEN INCHES RECOVERED	TIME	SAMPLE NUMBER SAMPLE DEPTH	BLOWS/FT. SAMPLER	OVA			DEPTH IN FEET	SOIL GRAPH
					AUGER	SAMPLE	CUTTINGS		
445		1830						160	SP
								1	
								2	
								3	
								4	
								5	
								6	
								7	SP
								8	
								9	
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Blue-gray Sand, with some fine gravel,
Sand is f-m grained, rounded, saturated,
poorly graded.

- Sand becomes fine grained

Blue-gray silty sand 10-15% fines,
85-90% v. fine to fine sand, saturated
making a lot of water, poorly graded,
(uniform fine sand).

A3 Above, Saturated

23334

LOCATION OF BORING

JOB NUMBER

06792-032

Tesoro

LOCATION

Kenai Ak

DRILLING METHOD:

BORING NUMBER

T-2A

SAMPLING METHOD:

SHEET

10 of 10

DRILLING

START

FINISH

TIME

TIME

2200

SURFACE CONDITIONS:

DATE

DATE

5/29/94

See Page 1

See Page 1

DATUM

ELEVATION

SAMPLER TYPE	INCHES DRIVEN INCHES RECOVERED	TIME	SAMPLE NUMBER SAMPLE DEPTH	BLOWS/FT. SAMPLER	OVA			DEPTH IN FEET	SOIL GRAPH
					AUGER	SAMPLE	CUTTINGS		
								180	
								1	SP
								2	SM
								3	
								4	
								5	
								6	
								7	SP
								8	SM
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								21	SP
								22	SM
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Blue gray Silty Sand, with some fine gravel, Poorly graded, saturated, 20-25% fines, 5-10% fine rounded gravel, 65-75% f-m sand, rounded (pred. fine sand)

f-m sand w/some gravel AS ABOVE

AS ABOVE.

- increase in fine gravels
Blue gray Silty fine sand

Drilling terminated at 200' bgs.
water encountered at 50' in unconfined
aquifer and 90' in confined aquifer.

Dames & Moore

SB 7-12-22 BDBB

DRILLING CONTRACTOR

Hughes/Alpine

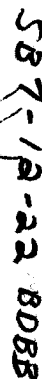
35253

BY Mark Ochsner

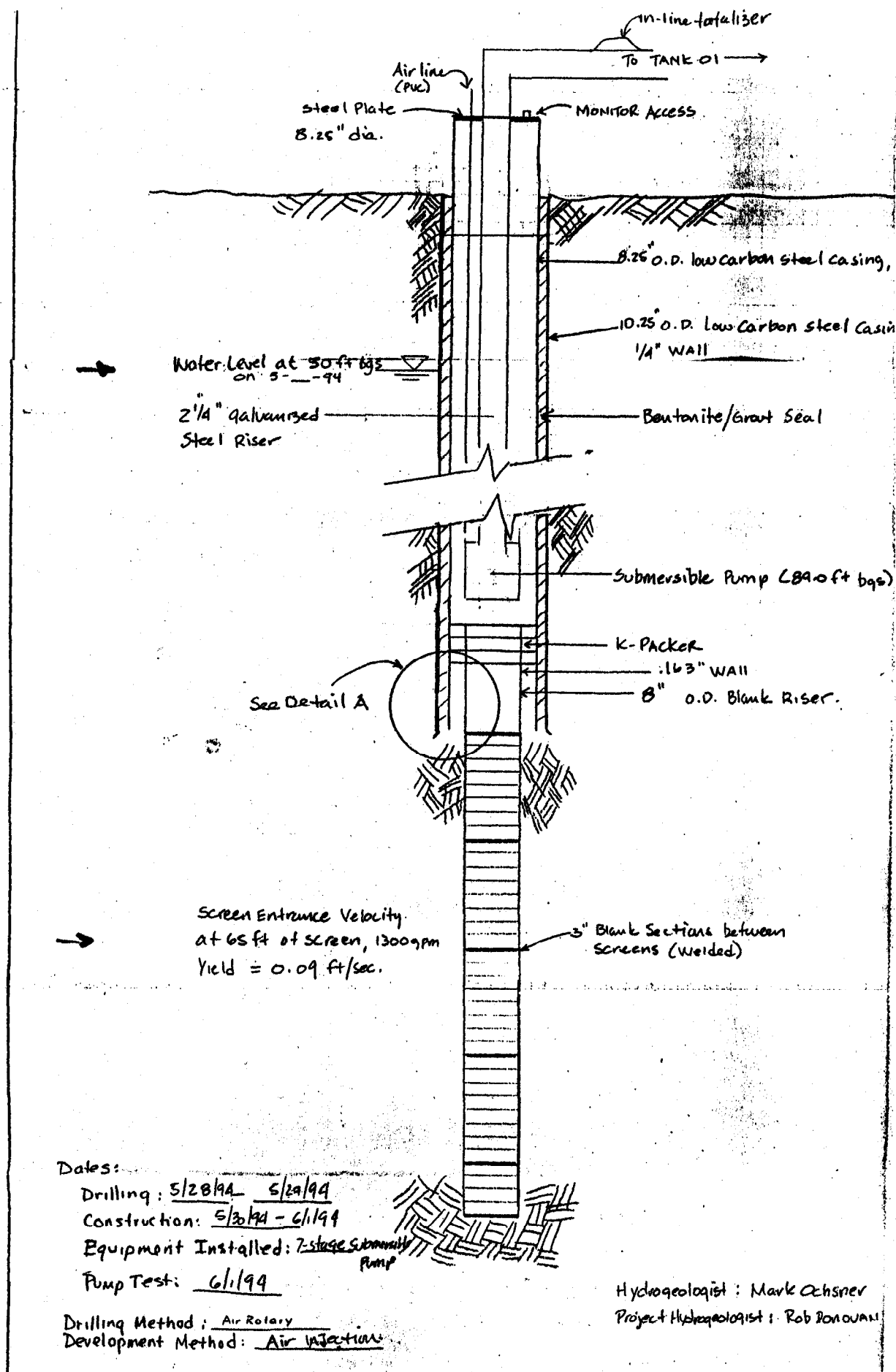
CHECKED BY

DATE 5/29/94

15



SB7-12-22BDBB



SB7-1A-2A BDBB

Cased to 100 ft, screened to 168 ft. SW 50 ft BLS, 1300 gpm

Screen Details:

Depth (bgs.)	Screen size
99.8 - 110.3	80-slot (0.080 inch)
110.3 - 120.8	10-slot (0.010 inch)
120.8 - 136.5	20-slot (0.020 inch)
136.5 - 157.5	30-slot (0.030 inch)
157.5 - 168.0	20-slot (0.020 inch)

1/4" wall

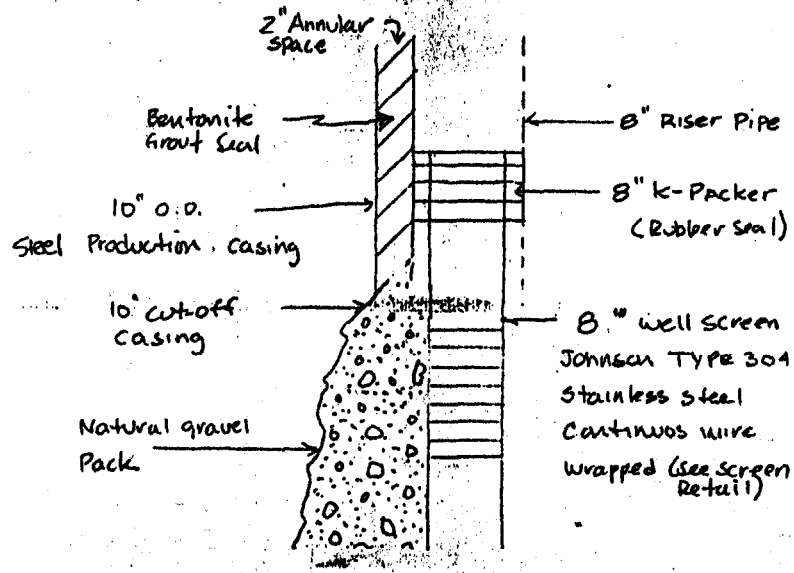
Submersible Pump:

3 Phase 460V Model 4006H7
7-stage Fairbanks-Morse Pump
3400 Turbine Franklin Motor

ELEVATIONS (MSL)

Ground Level:
Monitoring Port Elevation:
Static Water elevation:

DETAIL A



CONSTRUCTION DETAILS

UPPER CONFINED AQUIFER

PRODUCTION WELL T-2A

Tesoro Petroleum Company, Kenai AK
June 1994

SB712-22 BDBB