CITY OF MORGAN HILL

BOYS RANCH WELL #2A AND JACKSON WELL #3 WELL PUMP STATIONS

MARCH 2017

LOCATION MAP

NO SCALE

BID SET

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APPROVAL FOR CONSTRUCTION

Luhdorff & Scalmanini, Consulting Engineers

4-3-17

City of Morgan Hill

REGISTERED PROFESSIONAL ENGINEER
JASON M. COLEMAN
No. C 78366
Exp. 9\30\2017
CIVIL
STATE OF CALIFORNIA
03-30-2017

TITLE SHEET
Boys Ranch Well #2A and Jackson Well #3 Well Pump Stations
City of Morgan Hill
Morgan Hill, California

LUHDORFF & SCALMANINI CONSULTING ENGINEERS
500 FIRST STREET
WOODLAND, CALIFORNIA
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REVISIONS

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ABBREVIATIONS

AB	AGGREGATE BASE
ABBC	ASBESTOS BONDED BITUMINOUS COATED
ABM	AIR-BLOWN MORTAR
ABT	ANCHOR BOLT
ABUT	ABUTMENT
AC	ASPHALTIC CONCRETE
ACB	ASPHALT CONCRETE BASE
ACP	ASBESTOS CEMENT PIPE
AFES	ALTERNATIVE FLARED END SECTION
ALT	ALTERNATE
ASB	AGGREGATE SUBBASE
AVE	AVENUE
AZ	AZIMUTH
BSP	BLACK STEEL PIPE
BLDG	BUILDING
BLVD	BOULEVARD
BM	BENCH MARK
BV	BUTTERFLY VALVE
CAP	CORRUGATED ALUMINUM PIPE
CARV	COMBINATION AIR RELEASE VALVE
CB	CATCH BASIN
CC	CENTER TO CENTER
CF	CUBIC FOOT
CFM	CUBIC FEET PER MINUTE
CIP	CAST IRON PIPE
CLR	CLEAR, CLEARANCE
℄	CENTERLINE
CL	CLASS
C.L.	CHAIN LINK
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	COUNTY
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST	CONSTRUCT(ION)
CRSP	CONCRETED ROCK SLOPE PROTECTION
CSP	CORRUGATED STEEL PIPE
CTB	CEMENT TREATED BASE
CY	CUBIC YARD
CV	CHECK VALVE
D	DEPTH
DBL	DOUBLE
DET	DETAIL
DL	DRAINAGE/DROP INLET
DIA	DIAMETER
DIP	DUCTILE IRON PIPE
DIST	DISTANCE
DR	DRIVE
DWG	DRAWING
DWY	DRIVEWAY
EA	EACH
ECR	END CURB RETURN
ELEV	ELEVATION
EL	ELBOW
ELEC	ELECTRIC
EMB	EMBANKMENT
EP	EDGE OF PAVEMENT
EST.	ESTIMATED
ETW	EDGE OF TRAVELED WAY
EW	EACH WAY
EXC	EXCAVATION
EXIST	EXISTING
EXP JT	EXPANSION JOINT
FCA	FLANGED COUPLING ADAPTER
FDN	FOUNDATION
FES	FLARED END SECTION
FF	FILTER FABRIC
F&G	FRAME & GRATE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FLG	FLANGE(D)
FS	FLOW SWITCH
FT	FEET OR FOOT
FTG	FOOTING
GA	GAGE
GAF	GALVANIZE AFTER FABRICATION
GAL	GALLON
GALV	GALVANIZED
GPM	GALLONS PER MINUTE
GSP	GALVANIZED STEEL PIPE
GV	GATE VALVE
H	HEIGHT
HORIZ	HORIZONTAL
HS	HIGH STRENGTH
HV	HOSE VALVE
HW	HEADWALL
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
IB	IMPORTED BORROW
ID	INSIDE DIAMETER
INST	INSTALL
INV	INVERT
IRR	IRRIGATION
JP	JOINT POLE
JT	JOINT
L	LENGTH
LB	POUND
LF	LINEAR FOOT
LOC	LOCATION
LN	LANE
LS	LUMP SUM
LT	LEFT
LWL	LOW WATER LEVEL
MAX	MAXIMUM
MBGR	METAL BEAM GUARD RAILING
MCC	MOTOR CONTROL CENTER
MH	MANHOLE
MI	MILE(S)
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MKR	MARKER
ML	MATCH LINE
MOD	MODIFIED OR MODIFY
MON	MONUMENT
MTL	MATERIAL
NO	NUMBER
NTS	NOT TO SCALE
OBLR	OBLITERATE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OG	ORIGINAL GROUND
OH	OVERHEAD
PCC	PORTLAND CEMENT CONCRETE
PED	PEDESTRIAN
PG	PROFILE GRADE
PI	POINT OF INTERSECTION
PL	PLATE
P/L	PROPERTY LINE
PB	PULL BOX
POC	POINT ON HORIZONTAL CURVE
POT	POINT ON TANGENT
PP	POWER POLE
PRV	PRESSURE RELIEF VALVE
PVC	POLYVINYL CHLORIDE (PIPE)
PVMT	PAVEMENT
R	RADIUS
R&D	REMOVE & DISPOSE
R&R	REMOVE & RELOCATE
R&S	REMOVE & SALVAGE
R&W	REMOVE & WASTE
RCP	REINFORCED CONCRETE PIPE
RD	ROAD
RD	RELATIVE DENSITY
REINF	REINFORCED OR REINFORCING
REL	RELOCATE
RET	RETAINING
RP	REFERENCE POINT
RR	RAILROAD
RSP	ROCK SLOPE PROTECTION
RT	RIGHT
RTE	ROUTE
RW	RETAINING WALL
R/W	RIGHT OF WAY
RWD	REDWOOD
SALV	SALVAGE
SC	SAND CUSHION
SCH	SCHEDULE
SCSP	SACKED CONCRETE SLOPE PROTECTION
SD	STORM DRAIN
SEC	SECTION
SEP	SEPARATION
SG	SUBGRADE
SHO	SHOULDER
SHT	SHEET
SM	SELECTED MATERIAL
SPEC	SPECIAL
SPP	SLOTTED PLASTIC PIPE
SQFT	SQUARE FOOT
SQYD	SQUARE YARD
SST	STAINLESS STEEL
STL	STEEL
ST	STREET
STA	STATION
STD	STANDARD
SURF	SURFACING
SW	SIDEWALK OR SOUND WALL
SWI	STORM WATER INLET
SS	SANITARY SEWER
TBM	TEMPORARY BENCH MARK
TBR	TIMBER
TC	TOP OF CURB
TEMP	TEMPORARY
TG	TOP OF GRADE
THD	THREADED
TP	TELEPHONE POLE
TRANS	TRANSITION
TYP	TYPICAL
TYP SEC	TYPICAL SECTION
UD	UNDERDRAIN
VAL	VALVE
VAR	VARIABLE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
W	WIDTH
W/	WITH
W/O	WITHOUT
WH	WEEP HOLE
WWM	WELDED WIRE MESH
WSP	WELDED STEEL PIPE
WT	WEIGHT
WM	WATER METER
WV	WATER VALVE
WW	WING WALL
XFMR	TRANSFORMER
XING	CROSSING
X SEC	CROSS SECTION

GENERAL NOTES

1.) BEFORE BEGINNING ANY EXCAVATION, THE CONTRACTOR SHALL NOTIFY THE UNDERGROUND SERVICE ALERT SYSTEM (1-800-642-2444) 48 HOURS PRIOR TO COMMENCEMENT OF EXCAVATION.

2.) LOCATIONS & DEPTHS OF EXISTING UNDERGROUND PIPELINES ARE APPROXIMATE. CONTRACTOR IS RESPONSIBLE FOR EXACT FIELD LOCATIONS. A MINIMUM OF 6" CLEARANCE BETWEEN PIPES CROSSING UNDERGROUND SHALL BE MAINTAINED WHETHER SHOWN ON DRAWINGS OR NOT. ANY CONFLICTS IN PIPING WILL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.

3.) PIPELINES SHALL SLOPE UNIFORMLY BETWEEN ELEVATIONS SHOWN ON PLANS. ALL PIPE ELEVATIONS SHOWN REFER TO THE INVERT UNLESS OTHERWISE SHOWN. UNLESS OTHERWISE SHOWN, ALL PIPELINES SHALL HAVE A MINIMUM COVER OF 36 INCHES.

4.) CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL, PAVEMENT CUTTING, TRENCHING, SHORING, BACKFILL & PAVEMENT REPLACEMENT IN ACCORDANCE WITH THE LATEST EDITIONS OF THE STANDARD CONSTRUCTION SPECIFICATIONS FOR THE CITY OR COUNTY IN WHICH THE WORK IS BEING DONE.

5.) ALL WATER MAINS ARE REQUIRED TO PASS THE PRESSURE, LEAKAGE AND BACTERIOLOGICAL TESTS BEFORE CONNECTION TO THE EXISTING CITY DISTRIBUTION SYSTEM.

EXISTING TOPOGRAPHIC LINES & SYMBOLS

- Building or Foundation
- Shoulder
- Surfaced Road w/Lone Stripe
- Edge of Pavement
- Curb w/Gutter
- Gravel or Dirt Road Drives or Walks
- Trail
- Railroad
- Bridge
- Culvert & Headwalls
- Fence & Gate
- Retaining Wall w/Fence on Top
- Wall
- Guard Rail
- Small Stream or Ditch
- Body of Water
- Orchard, Missing Trees, Interior Trees
- Trees
- 27.0 Spot Elevation
- x 27.0 Spot Elevation
- Ground Cover
- Roadside Signs (New & Existing)
- Transmission Tower
- Fire Hydrant
- Power/Utility Pole
- Manhole
- Valve
- Water Meter

Existing Underground Utilities

- W — W — Water
- G — G — Gas
- S — S — Sewer
- E — E — Electric
- T — T — Telephone
- GS — GS — Gasoline
- O — O — Oil
- TV — TV — Television
- SD — SD — Storm Drain
- Fiberoptics

CONTROL POINTS

- Horizontal & Vertical Control Point
- Horizontal Control Point
- Vertical Control Point
- Bench Mark

NEW CONSTRUCTION & CADASTRAL SYMBOLS

- R/W — Right of Way Lines
- Toe of Slope / Top of Cut — Slope Lines
- Original Ground Line
- State / County / City / Forest / Subdivision, Section, Grant / Rancho — Boundary Line
- 16.0 — Spot Elevation
- Structure (Bridge)
- Fire Hydrant
- Manhole
- Valve

New Underground Utilities

- W — W — Water
- G — G — Gas
- S — S — Sewer
- E — E — Electric
- T — T — Telephone
- GS — GS — Gasoline
- O — O — Oil
- TV — TV — Television
- SD — SD — Storm Drain

- ℄ 9 260 1 — Centerline or Layout Lines
- 1 / M-1 — Section Identification Number; Sheet Number Where Section Appears (-- Indicates section located on same page)
- 1 / M-1 — Detail Identification Number; Sheet Number Where Detail Appears (--) Indicates detail located on same page)
- 1 — Detail/Section Identification Number; Non-Referenced Detail
- New Facilities
- Existing Facilities
- Fence
- Property Line
- Easement
- New Embankment
- Existing Embankment
- Existing Pipe or Structure to be Abandoned or Removed
- 12" — Tree & Trunk Diameter
- 12" — Tree to be Removed
- Existing Power Pole
- Face of Wall — New Wall
- New Guard Railing
- Concrete Barrier
- Double Metal Beam Barrier, Double Thrie Beam Barrier
- Curb Without Gutter
- Curb w/Gutter
- Flared End Section — Ditch Flow Line
- Drainage Inlet — Pipe Culvert
- Headwall Endwall — Pipe Culvert

PIPING SYMBOLS

- Concrete Thrust Block w/Anchor Rod
- Gate Valve, Ball Valve, Globe Valve
- Check Valve
- Split Disc Check Valve
- Solenoid Valve
- Pressure Reducing Valve
- Saunders Diaphragm Valve
- Pressure Relief Valve
- Plug Valve
- Angle Valve
- Butterfly Valve
- Union
- Reducer
- Strainer
- Cleanout
- Pressure Gauge or Switch
- Hose Valve
- Fire or Wharf Hydrant
- Mechanical Joint or Bell & Spigot Fitting
- Flanged Fitting
- Flanged Coupling Adapter
- Flexible Coupling
- Grooved Coupling

REGISTERED PROFESSIONAL ENGINEER — JASON M. COLEMAN — No. C 78366 — Exp. 9\30\2017 — CIVIL — STATE OF CALIFORNIA — 03-30-2017

ABBREVIATION, NOTES AND SYMBOLS

Boys Ranch Well #2A and Jackson Well #3 Well Pump Stations
City of Morgan Hill
Morgan Hill, California

LUHDORFF & SCALMANINI CONSULTING ENGINEERS
500 FIRST STREET
WOODLAND, CALIFORNIA
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REVISIONS

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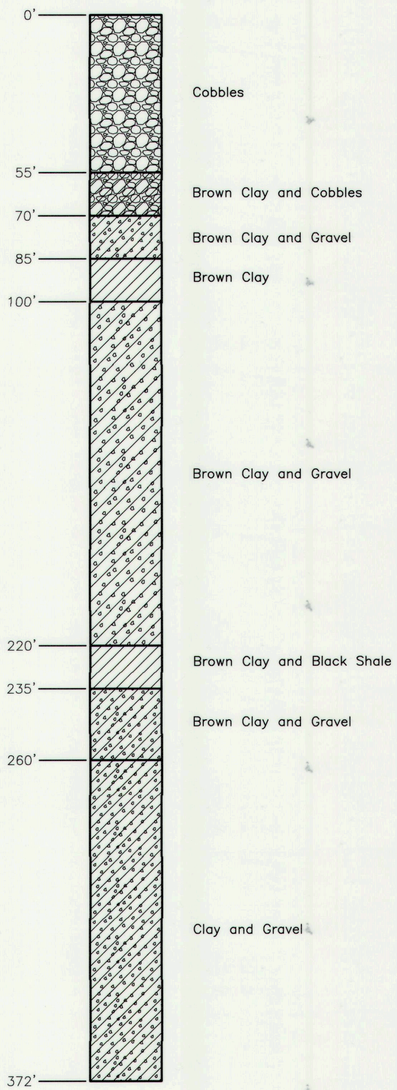
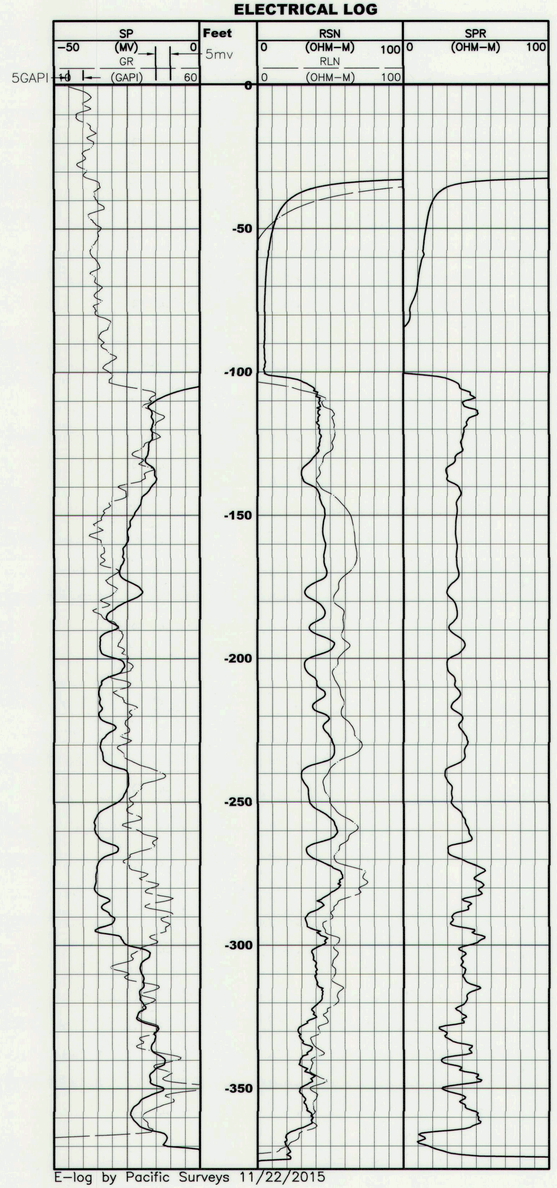
BOYS RANCH WELL #2A LITHOLOGY

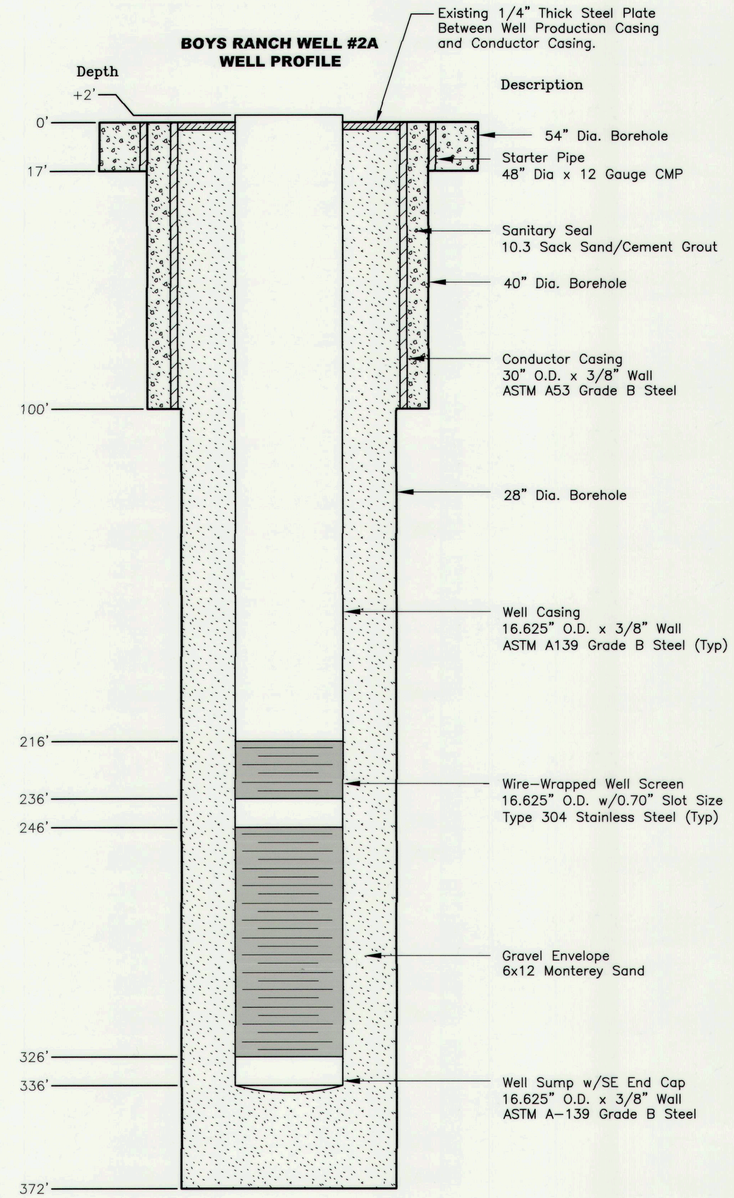


BOYS RANCH WELL #2A ELECTRICAL LOG



E-log by Pacific Surveys 11/22/2015

BOYS RANCH WELL #2A WELL PROFILE



NOTE:

THE DATA PROVIDED ON THIS SHEET IS FOR INFORMATION PURPOSES. SEE SHEETS M-1& M-2 FOR INFORMATION REGARDING THE PUMP AND PEDESTAL INSTALLATION.

AS-BUILT

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PRODUCTION WELL PROFILE
Boys Ranch Well #2A and Jackson Well #3 Well Pump Stations
City of Morgan Hill
Morgan Hill, California

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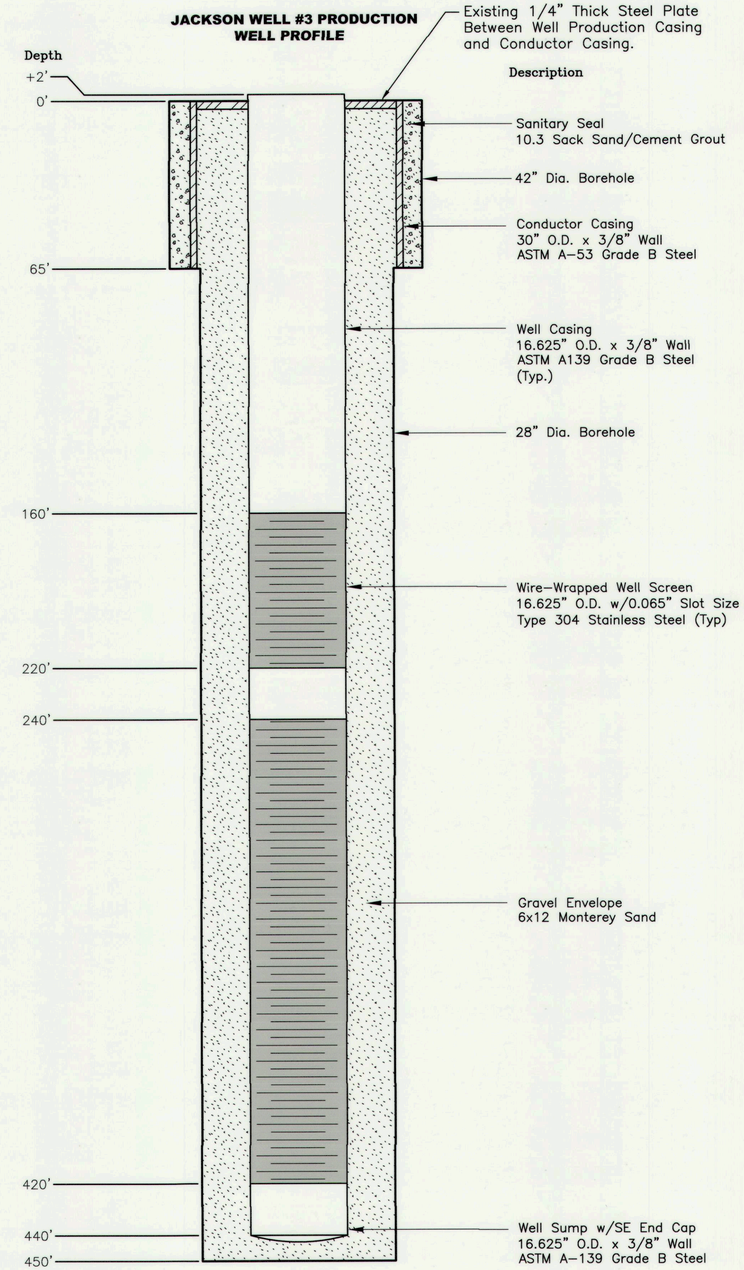
JACKSON WELL #3
TEST HOLE LITHOLOGY

Depth	Description
0'	Clayey Gravel with Sand – brownish yellow, fine to very coarse sand
10'	Clayey Gravelly Sand – brownish yellow, fine to very coarse sand
30'	Clayey Sand with Gravel – fine to very coarse sand
50'	Sandy Gravel with Clay – fine to very coarse sand
60'	Silty Clay with trace Sand – yellowish brown, fine to very coarse sand
70'	Sandy Gravel with trace Clay – yellowish brown, fine to very coarse sand
80'	Clayey Sand with Gravel – yellowish brown, fine to very coarse sand
90'	Sandy Clay – yellowish brown
95'	Clayey Gravel with Sand – yellowish brown, fine to very coarse sand
110'	Sand and Gravel with Clay – yellowish brown, fine to very coarse sand
150'	Clayey Sand – yellowish brown, fine to very coarse sand
180'	Sandy Clay – yellowish brown, fine to coarse sand
190'	Clayey Sand – yellowish brown, fine to coarse sand
210'	Sandy Clay – yellowish brown, fine to coarse sand
220'	Gravel and Sand – yellowish brown, very coarse sand
230'	Sandy Clay – yellow brown, fine to very coarse sand
240'	Gravel and Sand with Clay – yellowish brown, fine to very coarse sand
250'	Gravelly Sand – fine to very coarse sand
270'	Sandy with Clay – yellow brown, fine to very coarse sand
280'	Sandy Gravel with Clay – fine to very coarse sand
310'	Sand with Gravel trace Clay – fine to very coarse sand
320'	Gravelly Sand – blackish sand, fine to very coarse sand
340'	Sand and Gravel – blackish greenish sand, fine to very coarse sand
360'	Gravelly very coarse Sand – blackish, fine to very coarse sand
380'	Clayey Gravelly Sand – yellow brown, fine to very coarse sand
390'	Gravelly Sand – fine to very coarse sand
410'	Sand and Gravel with Clay – fine to very coarse sand
460'	Gravelly Sand with Clay – fine to very coarse sand
480'	Clayey Sandy Gravel – fine to very coarse sand
525'	

JACKSON WELL #3 PRODUCTION WELL PROFILE



NOTE:

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PRODUCTION WELL PROFILE
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City of Morgan Hill
Morgan Hill, California

LUHDORFF & SCALMANINI CONSULTING ENGINEERS

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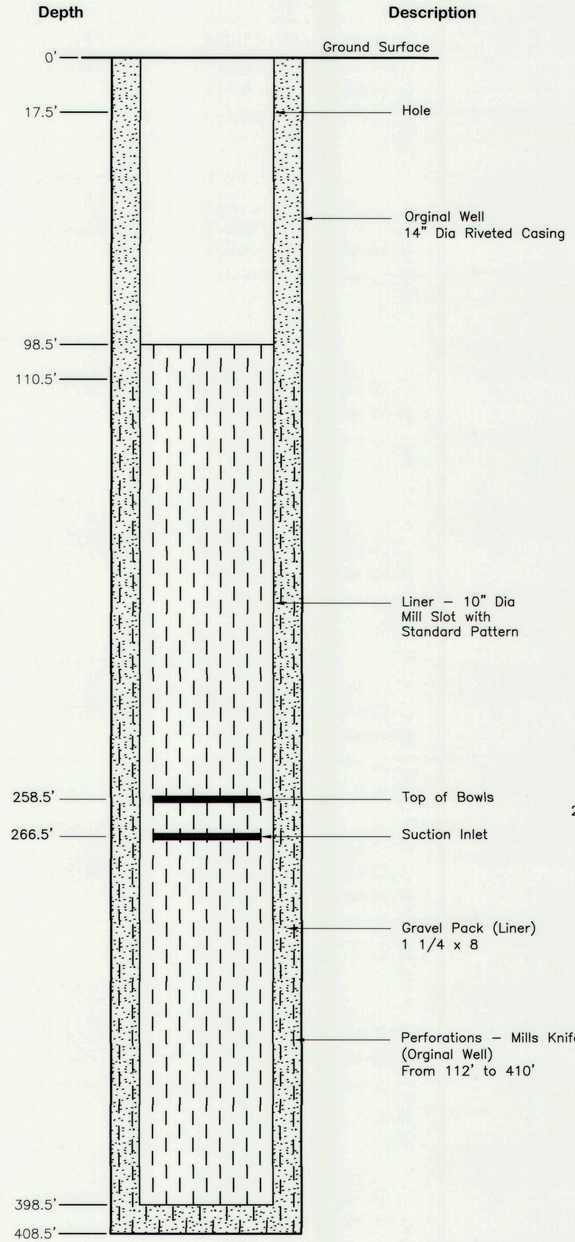
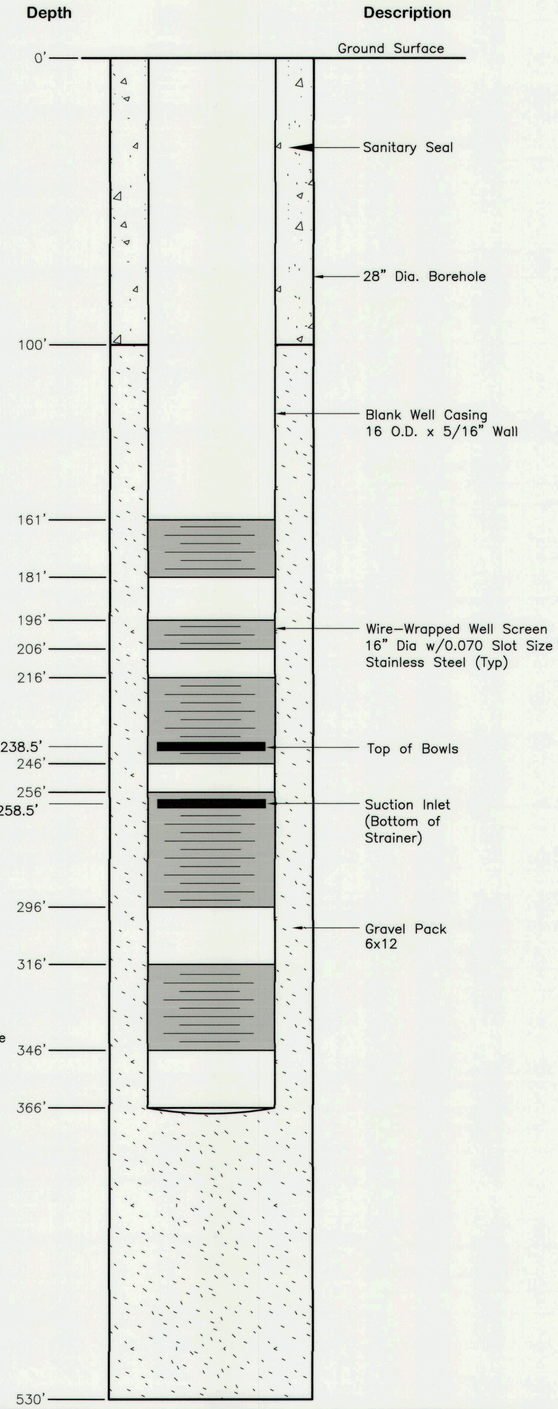
JACKSON WELL NO.1 EXISTING WELL PROFILE



Note:

Liner Well
Completion Report
No. 510024 Dated
May 5, 1997

BOYS RANCH WELL NO.2 EXISTING WELL PROFILE



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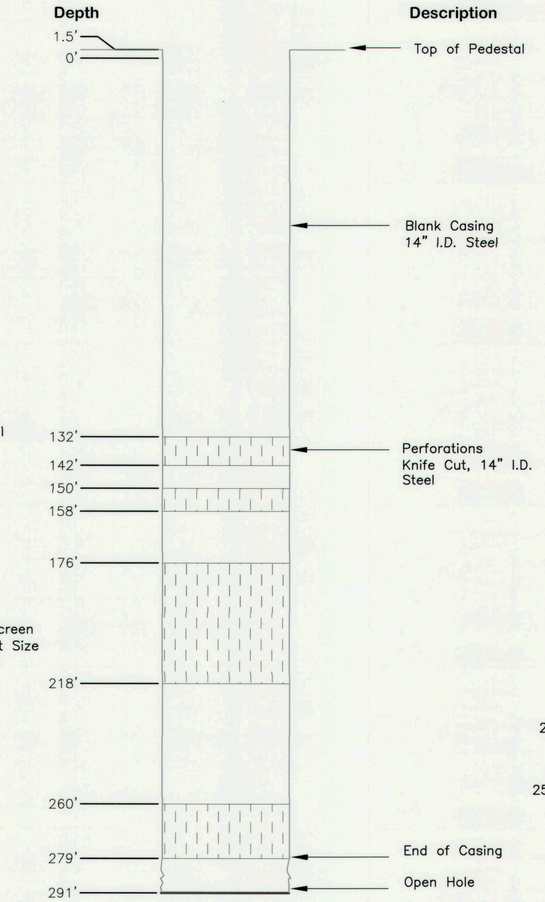
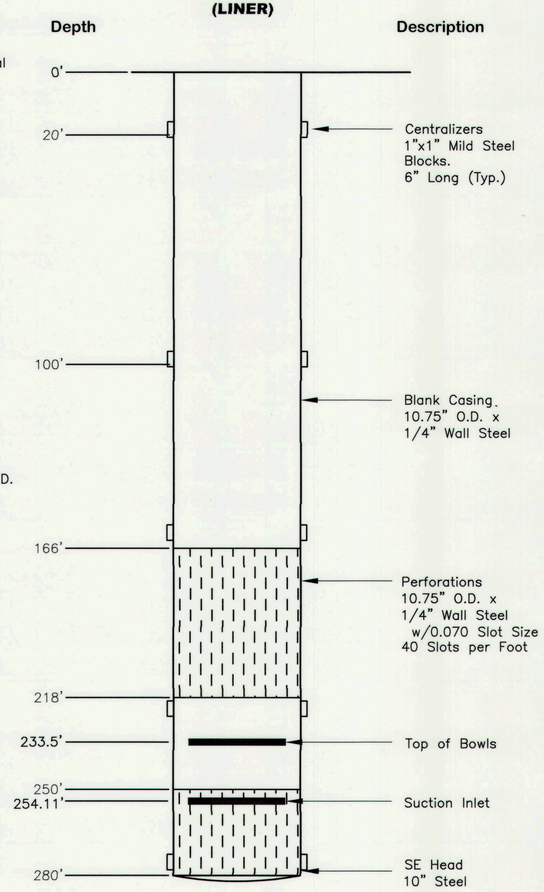


BOYS RANCH WELL NO.3 EXISTING WELL PROFILE (LINER)



NOTES:

1.) CENTRALIZERS 3 PER LOCATION INSTALLED ABOVE AND BELOW THE SCREEN SECTION AND WHERE INDICATED ON THE PROFILE.

2.) LINER SECURED TO THE PEDESTAL/CASING WITH FOUR WEBBING STRIPS AS DIRECTED BY THE ENGINEER.

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