



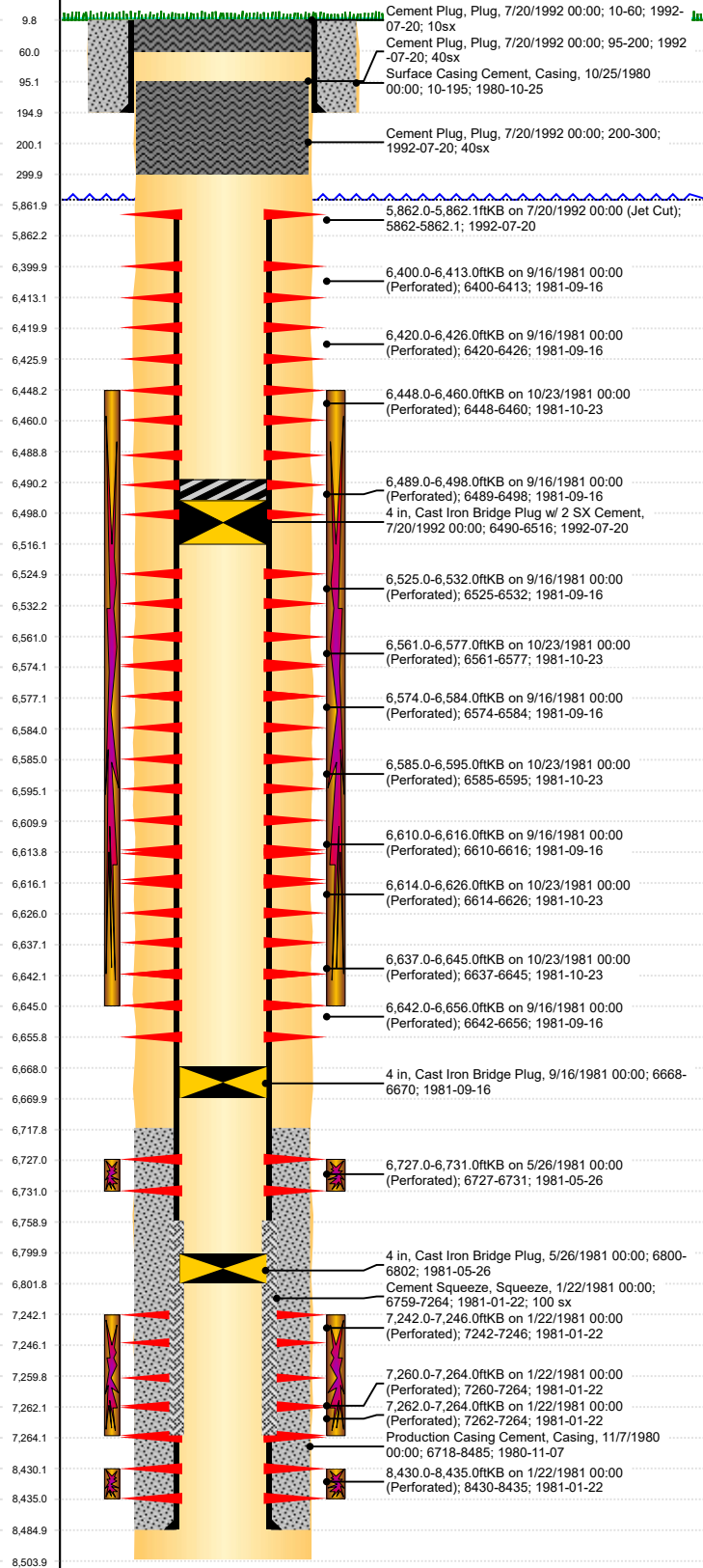
# PA Wellbore For State - Vertical

Well Name: FRANKS 02

Original Hole

MD  
(ftKB)

Vertical schematic (actual)



Well Header				
Surface UWI	Business Unit	Gov Auth Dist	Prod Tree Loc	
0512310091	Rockies			
Orig. KB to Gnd (ft)	Original Spud Date	Abandon Date	Well Sub-Status	High...
10.00	10/22/1980			N
Comment				
Operator: Industrial Gas Associates Inc				

Geologic Horizons	
Formation Name	Final Top MD (ftKB)
Fox Hills	700.0
Formation Name	Final Top MD (ftKB)
Pierre (Upper) Aquifer Base	1,830.0
Formation Name	Final Top MD (ftKB)
A_Sand-Top_Prod	2,450.0
Formation Name	Final Top MD (ftKB)
Niobrara	6,475.0
Formation Name	Final Top MD (ftKB)
J Sand	7,242.0
Formation Name	Final Top MD (ftKB)
Lyons	8,430.0

Congressional Location								
Quarter 3	Quarter 4	Section	Township	Twnshp N...	Range	Rng E/W Dir	Latitude (°)	Longitude (°)

Wellbore Sections			
Section Des	Hole Size (in)	Top Depth (ftKB)	Btm Depth (ftKB)
Surface	12 1/4	10.0	195.0
Production	7 7/8	195.0	8,504.0

Casing Strings						
Csg Des	Run Date	OD (in)	Wt/Len (lb/ft)	Grade	Top Depth (MD) (ftKB)	Set Depth (MD) (ftKB)
Surface	10/24/1980	8 5/8	24.00	J-55	10	195
Production Casing	11/7/1980	4 1/2	11.60	J-55	10	8485

Cement			
Des	Start Date	Top (ftKB)	Btm (ftKB)
Surface Casing Cement	10/25/1980	10.0	195.0
Production Casing Cement	11/7/1980	6,718.0	8,485.0
Cement Squeeze	1/22/1981	6,759.0	7,264.0
Cement Plug	7/20/1992	200.0	300.0
Cement Plug	7/20/1992	95.0	200.0
Cement Plug	7/20/1992	10.0	60.0

Stim/Frac Summary	
Min Top Depth (ftKB)	Max Btm Depth (ftKB)
7,242.0	8,435.0
Min Top Depth (ftKB)	Max Btm Depth (ftKB)
6,727.0	6,731.0
Min Top Depth (ftKB)	Max Btm Depth (ftKB)
6,448.0	6,645.0

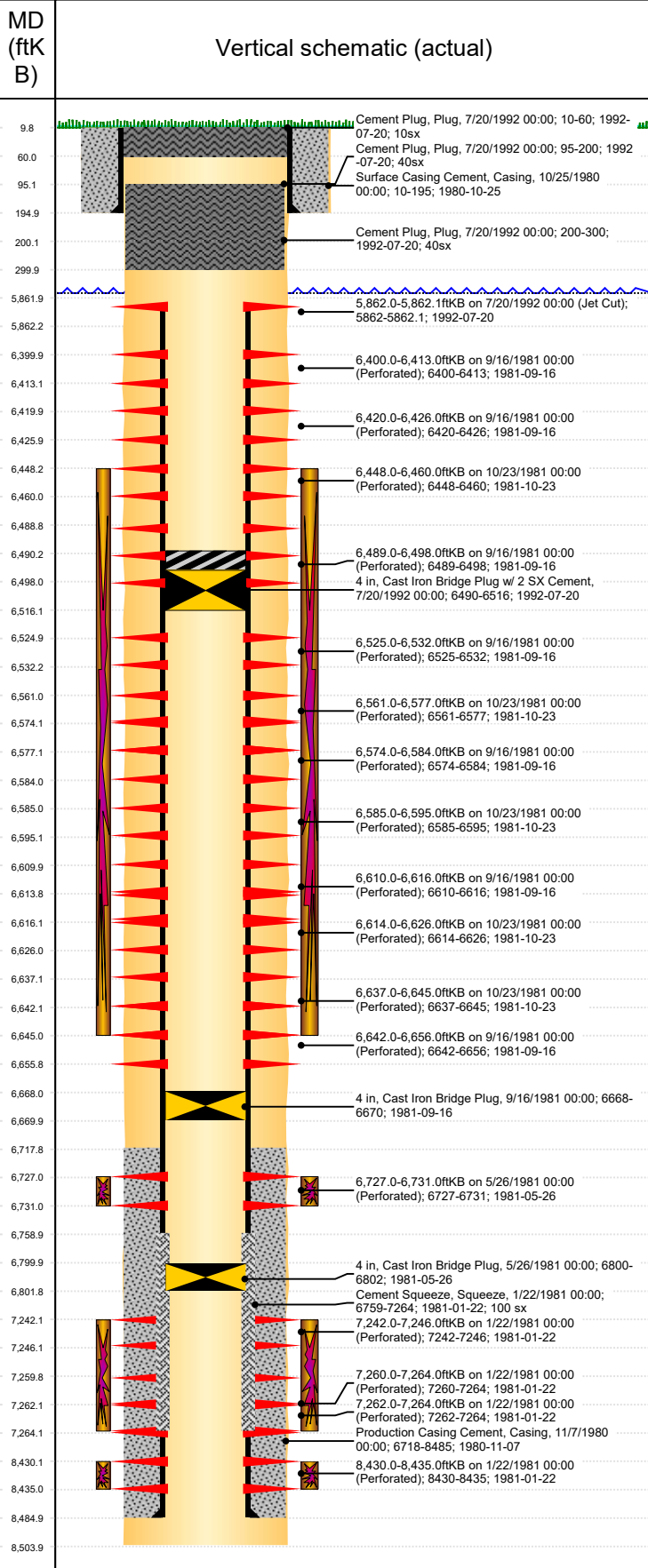
Perforations			
Linked Zone	Date	Top Depth (ftKB)	Bottom Depth (ftKB)
Linked Zone	7/20/1992 00:00	5,862.0	5,862.1
Linked Zone	9/16/1981 00:00	6,400.0	6,413.0
Linked Zone	9/16/1981 00:00	6,420.0	6,426.0
Linked Zone	10/23/1981 00:00	6,448.0	6,460.0
Linked Zone	9/16/1981 00:00	6,489.0	6,498.0
Linked Zone	9/16/1981 00:00	6,525.0	6,532.0
Linked Zone	10/23/1981 00:00	6,561.0	6,577.0
Linked Zone	9/16/1981 00:00	6,574.0	6,584.0
Linked Zone	10/23/1981 00:00	6,585.0	6,595.0
Linked Zone	9/16/1981 00:00	6,610.0	6,616.0
Linked Zone	10/23/1981 00:00	6,614.0	6,626.0
Linked Zone	10/23/1981 00:00	6,637.0	6,645.0
Linked Zone	9/16/1981 00:00	6,642.0	6,656.0
Linked Zone	9/16/1981 00:00	6,420.0	6,426.0
Linked Zone	10/23/1981 00:00	6,448.0	6,460.0
Linked Zone	9/16/1981 00:00	6,489.0	6,498.0
Linked Zone	9/16/1981 00:00	6,525.0	6,532.0
Linked Zone	10/23/1981 00:00	6,561.0	6,577.0
Linked Zone	9/16/1981 00:00	6,574.0	6,584.0
Linked Zone	10/23/1981 00:00	6,585.0	6,595.0
Linked Zone	9/16/1981 00:00	6,610.0	6,616.0
Linked Zone	10/23/1981 00:00	6,614.0	6,626.0
Linked Zone	10/23/1981 00:00	6,637.0	6,645.0
Linked Zone	9/16/1981 00:00	6,642.0	6,656.0



# PA Wellbore For State - Vertical

Well Name: FRANKS 02

## Original Hole



## Perforations

Linked Zone	Date	Top Depth (ftKB)	Bottom Depth (ftKB)
Niobrara, Original Hole	5/26/1981 00:00	6,727.0	6,731.0
J Sand, Original Hole	1/22/1981 00:00	7,242.0	7,246.0
J Sand, Original Hole	1/22/1981 00:00	7,260.0	7,264.0
J Sand, Original Hole	1/22/1981 00:00	7,262.0	7,264.0
Lyons, Original Hole	1/22/1981 00:00	8,430.0	8,435.0

## Other In Hole

Run Date	Des	Make	OD (in)	Top (ftKB)	Btm (ftKB)
5/26/1981	Cast Iron Bridge Plug		4	6,800.0	6,802.0
9/16/1981	Cast Iron Bridge Plug		4	6,668.0	6,670.0
7/20/1992	Cast Iron Bridge Plug w/ 2 SX Cement		4	6,490.0	6,516.0

## Logs

Date	Type	Depth Top (MD) (ftKB)	Btm (ftKB)