

PET

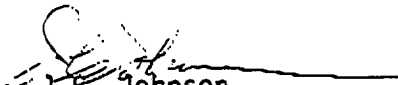
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To	BOB KENT	From	STEVE DUNN
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HORIZONTAL DRILLING PROCEDURE
 FEDERAL 12C, No. 11
 460' FSL & 330' FWL
 Sec. 12, T19N, R4W
 Sandoval County, New Mexico

RECEIVED
 OCT - 5 1994
 OIL CON. DIV.
 DIST. 3

- 1) Mill 7", 23# casing from 5158' to 5238'.
- 2) Set cement plug from 5300' to 5100', w/50 sx., Class H cement, 2% CaCl, 16+ PPG. Pull drillpipe to 5115', reverse out. TOH.
- 3) WOC for 36+ hours. TIH. Drill out cement to 5208'. KOP. TOH.
- 4) TIH. Kickoff cement plug @ 5208' w/horizontal tools to build 20" per 100' resulting in a 286.5' radius arc, a MD of 450' and a TVD of 5495' (+1215'), at an Azimuth of 197.3". TOH.
- 5) Run horizontal tools to drill the lateral at an Azimuth of 197.3" and a TVD of 5495' (+1215'). Build the TVD at 1' per 100' to a TVD of 5492' (+1218'). Continue drilling at a TVD of 5492' (+1218') until the Todilto formation is encountered.
- 6) Lay down drillpipe, collars and tools. Release rig.


 J.E. Johnson
 President

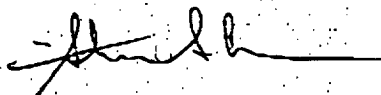
JCJ:kc

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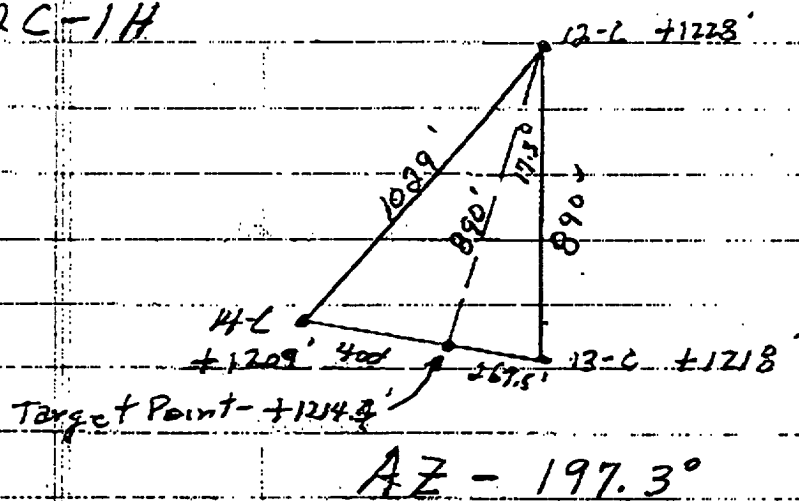
9/30/94

- ABOVE IS HORIZONTAL
 PLAN

- NMOC will FAX COPY
 OF ORDER TO YOU.

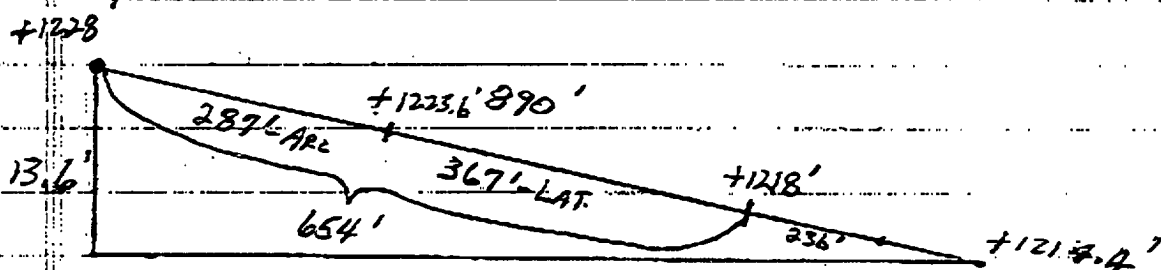


FED. 12C-1H



*8 6710' (12')
Top Entrance - 5482'
+1228'

TARGET POINT FROM
SURFACE LOCATION
850' S and 265' W



KOP - 5208'

ARC Length	Radius	°	VD	Cum VD	HL	Cum HL
100'	287'	20°	98.2'	5306.2'	17.3'	17.3'
100'		40°	86.3	5392.5'	49.8	67.1
100'		60°	64.1	5456.6'	76.4	143.5
75'		75°	28.7	5485.3'	69.2	212.7
25'		80°	5.4	5490.7'	24.4	237.1
25'		85°	3.3	5494.0'	24.8	261.9
25'		90°	1.1	5495.1'	25.0	286.9

ENTRADA TOP

+1228' - TVD 5482'

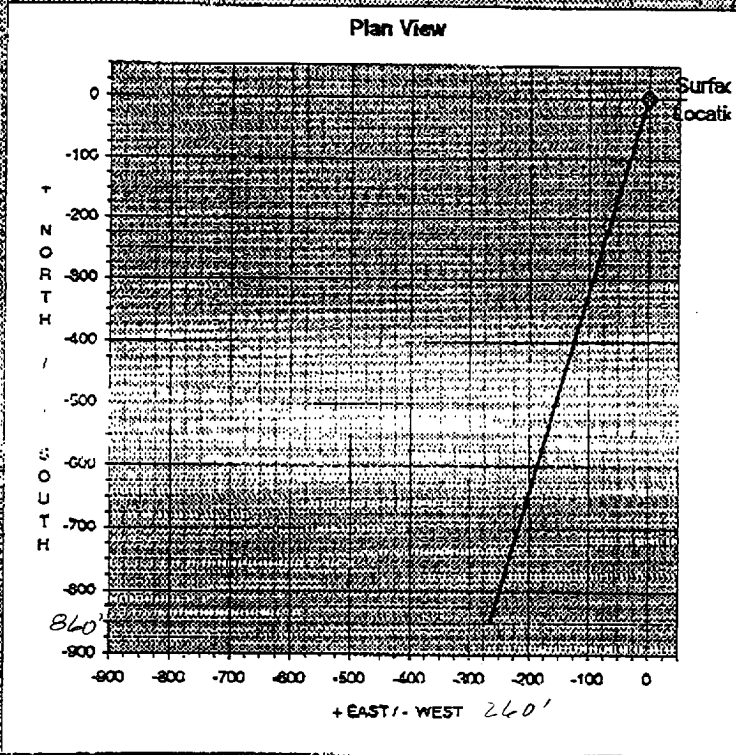
+1223.6' - TVD 5486.4'

Federal 12C No. 1... Directional Plot

South

North

Plan View



KOP=5,208

Entrada Top

T
V
D

Vertical Section

Note: All in feet