

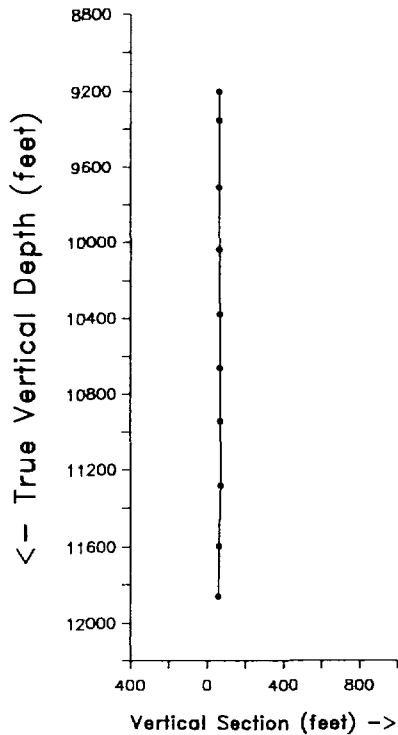
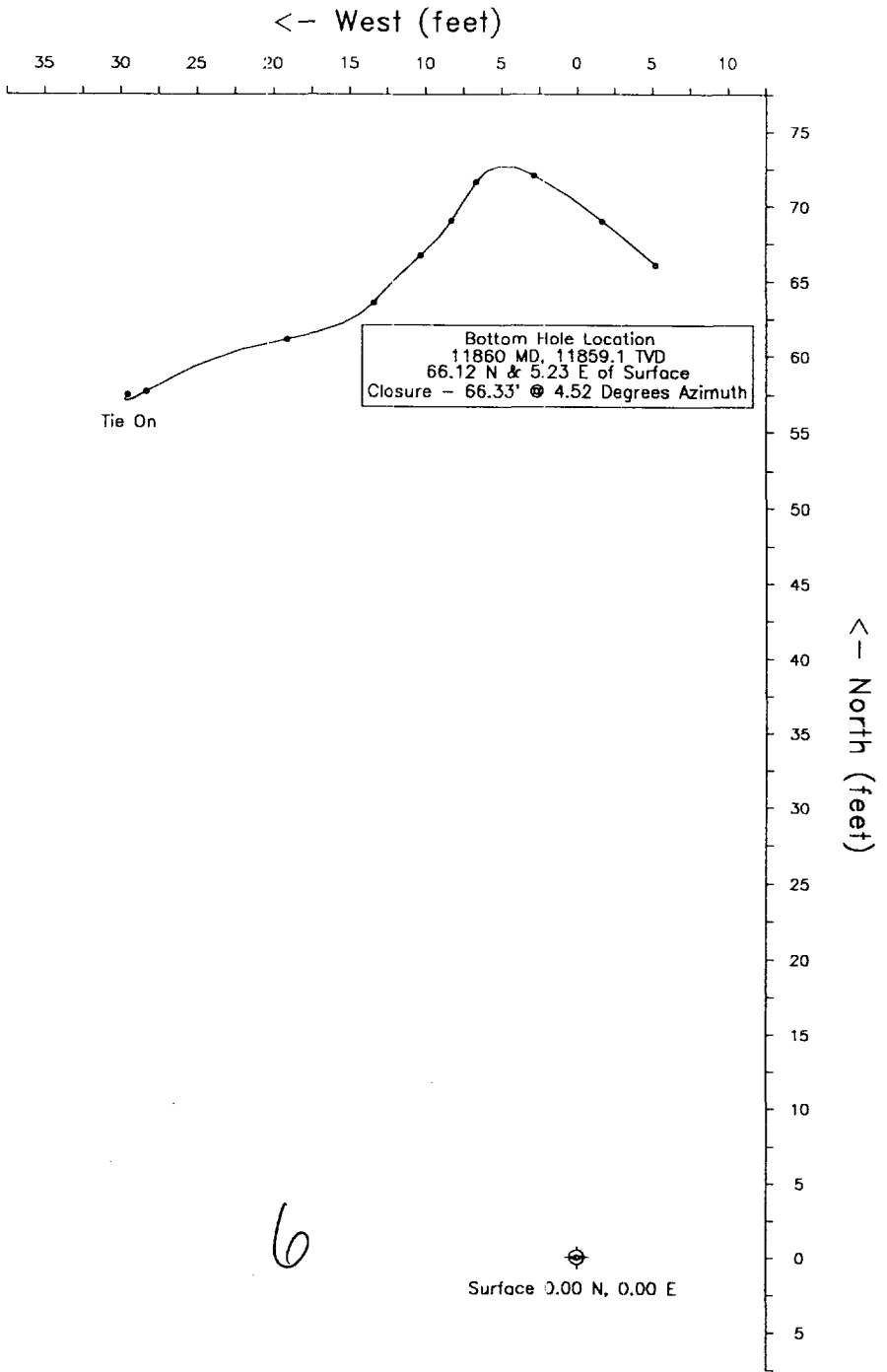
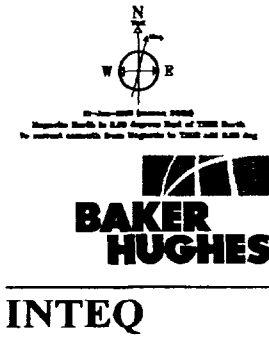
Manzano Oil Company

Structure : Cayuma 1A

Slot : slot #1

Field : UNKNOWN

Location : LEA COUNTY, NEW MEXICO



Vertical Section (feet) ->

Azimuth 342.62 with reference 0.00 N, 0.00 E from slot #1

Created by bartw
 Date plotted : 11-May-2000
 Plot Reference is Sidetrack 1.
 Coordinates are in feet reference slot #1.
 True Vertical Depths are reference rotary table.
 --- Baker Hughes INTEQ ---

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Manzano Oil Company
Cayuma 1A

slot #1
UNKNOWN
LEA COUNTY, NEW MEXICO

S U R V E Y L I S T I N G

by
Baker Hughes INTEQ

Your ref : Sidetrack 1
Our ref : svy1347
License :

Date printed : 11-May-2000
Date created : 27-Jan-2000
Last revised : 11-May-2000

Field is centred on n33 30 0.000,w103 30 0
structure is centred on n33 30 0.000,w103 30 0

Slot location is n33 30 0.000,w103 30 0.000
Slot Grid coordinates are N 910447.292, E 754038.883
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866

Reference North is True North

Manzano Oil Company
 Cayuma 1A, slot #1
 UNKNOWN, LEA COUNTY, NEW MEXICO

SURVEY LISTING Page 1
 Your ref : Sidetrack 1
 Last revised : 11-May-2000

| Measured Depth | Inclin. Degrees | Azimuth Degrees | True Vert Depth | R E C T A N G U L A R C O O R D I N A T E S | Dogleg Deg/100ft | Vert Sect |
|-------------------|--------------------|--------------------|--------------------|--|---------------------|--------------|
| 9200.00 | 0.93 | 219.95 | 9199.50 | 29.57 W | 0.00 | 63.66 |
| 9351.00 | 1.75 | 60.00 | 9350.48 | 28.36 W | 1.75 | 63.50 |
| 9704.00 | 1.50 | 80.00 | 9703.34 | 19.14 W | 0.17 | 64.09 |
| 10038.00 | 0.75 | 40.00 | 10037.28 | 13.43 W | 0.31 | 64.70 |
| 10378.00 | 0.75 | 49.00 | 10377.25 | 10.32 W | 0.03 | 66.79 |
| 10661.00 | 0.50 | 29.00 | 10660.23 | 8.33 W | 0.12 | 68.39 |
| 10944.00 | 0.75 | 34.00 | 10943.22 | 6.69 W | 0.09 | 70.40 |
| 11282.00 | 1.00 | 119.00 | 11281.19 | 2.87 W | 0.35 | 69.64 |
| 11595.00 | 1.00 | 129.00 | 11594.14 | 1.64 E | 0.06 | 65.39 |
| 11860.00 | 1.00 | 129.00 | 11859.10 | 5.23 E | 0.00 | 61.54 |

All data is in feet unless otherwise stated.
 Coordinates from slot #1 and TVD from rotary table.
 Bottom hole distance is 66.33 on azimuth 4.52 degrees from wellhead.
 Vertical section is from wellhead on azimuth 342.62 degrees.
 Calculation uses the minimum curvature method.
 Presented by Baker Hughes INTEQ