



1675 Broadway Suite 1500
Denver, Colorado 80202
(303) 534-3223 Fax (303) 534-1822

Report of Sub-Surface Directional Survey

Patina Oil & Gas

Company

Ale Partnership 1-29

Well Name

Weld County, Colorado

Location

Job Number

102190

Type of Survey

MWD

Date

November 05, 1998

Surveyed By

Butch Judge

Office

Denver



1675 Broadway Suite 1500
Denver, Colorado 80202
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Survey Certification Sheet

Patina Oil & Gas

Company

102190

Job Number

November 05, 1998

Date

Sec.29-T2N-R66W

Lease

Ale Partnership 1-29

Well Name

Weld County, Colorado

County and State

Surveyed from a depth of 7,611 feet to 8,005 feet MD

Type of Survey MWD

Directional Supervisor/Surveyor Butch Judge

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by Baker Hughes INTEQ. This report represents a true and correct Directional Survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

Erin Anderson

Erin Anderson

Well Planner

This document has been subscribed and affirmed, or sworn to before me in the county of Denver, state of Colorado, this 20th day of November, 1998.

Jayce A. Oakes

My commission expires August 4, 2000

Certification Number: 1195

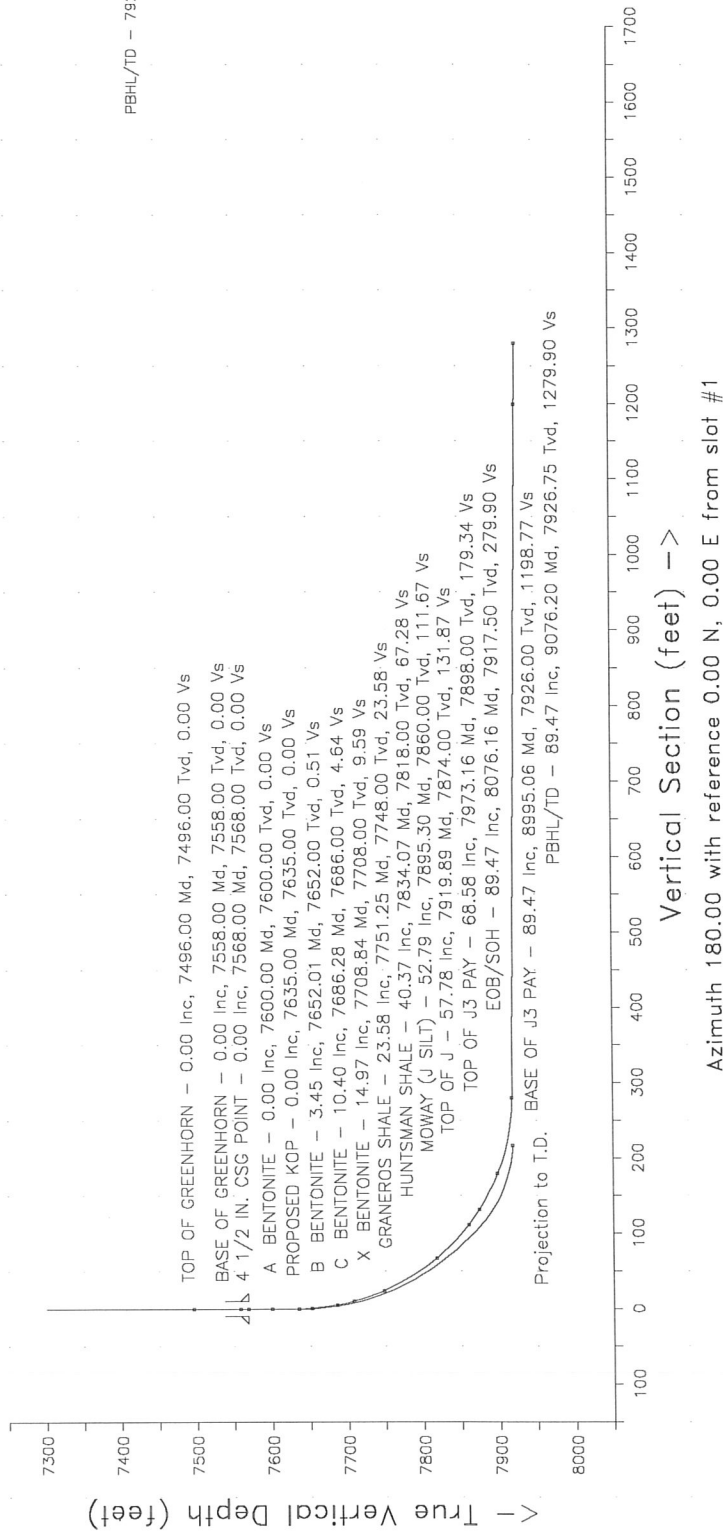
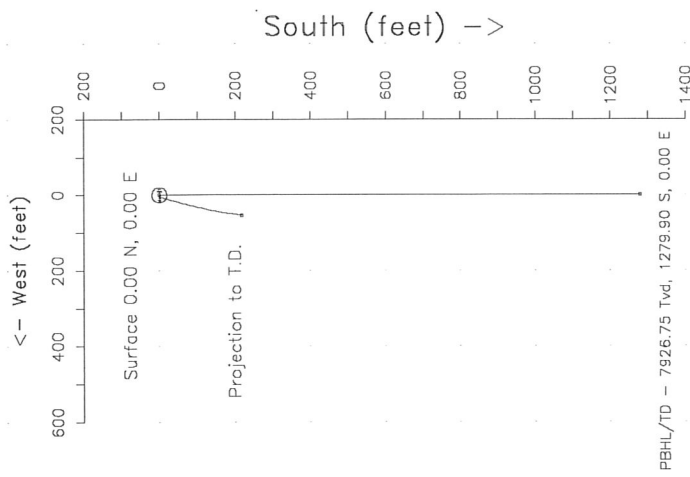
Certification Date November 20, 1998

PATINA OIL AND GAS

Structure : SEC.29-T2N-R6SW Well : ALE PARTNERSHIP 1-29
 Field : WELD COUNTY Location : COLORADO.

Structure : SEC.29-T2N-R66W Well : ALE PARTNERSHIP 1-29
Field : WELD COUNTY Location : COLORADO.

| Point | MD | Inc | Dir | TVD | North | East | V. Sect. | Deg/100 |
|------------------|---------|-------|--------|---------|----------|------|----------|---------|
| Top of | 0.00 | 0.00 | 180.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| End of Hold | 7635.00 | 0.00 | 180.00 | 7635.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| End of Build | 8076.16 | 89.47 | 180.00 | 7917.50 | -279.90 | 0.00 | 279.80 | 20.28 |
| D. & End of Hold | 9076.20 | 89.47 | 180.00 | 7926.75 | -1279.90 | 0.00 | 1279.90 | 0.00 |



Created by erina
Date plotted : 24-Nov-98
Plot Reference is A.O. PLAN .
Coordinates are in feet reference slot #1.
True Vertical Depths are reference Rk(B-GL=11').
--- Baker Hughes INTEQ ---

PATINA OIL AND GAS
SEC.29-T2N-R66W

ALE PARTNERSHIP 1-29
slot #1
WELD COUNTY
COLORADO.

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

by
Baker Hughes INTEQ

Your ref : MWD Survey
Our ref : svy4725
License :

Date printed : 20-Nov-98
Date created : 20-Nov-98
Last revised : 20-Nov-98

Field is centred on n40 20 0.000,w104 55 0
Structure is centred on n40 34 9.000,w104 22 6

Slot location is n40 34 28.565,w104 22 13.257
Slot Grid coordinates are N 454159.297, E 2313809.023
Slot local coordinates are 1980.00 N 560.00 W

Projection type: lambert - Colorado North (0501), Spheroid: Clarke - 1866
Reference North is True North

PATINA OIL AND GAS
SEC.29-T2N-R66W, ALE PARTNERSHIP 1-29
WELD COUNTY, COLORADO.

SURVEY LISTING Page 1
Your ref : MWD Survey
Last revised : 20-Nov-98

| 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 |
|-------------------|--------------------|--------------------|--------------------|--|---------------------|--------------|
| 7568.00 | 0.00 | 0.00 | 7568.00 | 0.00 E | 0.00 | 0.00 |
| 7611.00 | 2.60 | 267.50 | 7610.99 | 0.97 W | 6.05 | 0.04 |
| 7640.00 | 3.60 | 279.60 | 7639.94 | 2.53 W | 4.10 | -0.08 |
| 7670.00 | 7.70 | 218.00 | 7669.81 | 4.70 W | 22.56 | 1.35 |
| 7701.00 | 11.20 | 191.90 | 7700.40 | 6.60 W | 17.58 | 5.93 |
| 7732.00 | 18.10 | 196.20 | 7730.38 | 8.57 W | 22.52 | 13.51 |
| 7762.00 | 24.60 | 199.80 | 7758.30 | 11.98 W | 22.09 | 23.87 |
| 7793.00 | 30.30 | 196.00 | 7785.80 | 16.33 W | 19.23 | 37.48 |
| 7821.00 | 34.70 | 193.40 | 7809.41 | 20.13 W | 16.48 | 52.03 |
| 7852.00 | 39.70 | 195.50 | 7834.10 | 24.82 W | 16.64 | 70.16 |
| 7882.00 | 44.50 | 193.70 | 7856.35 | 29.87 W | 16.50 | 89.62 |
| 7912.00 | 50.80 | 194.70 | 7876.55 | 35.32 W | 21.14 | 111.10 |
| 7943.00 | 60.10 | 192.00 | 7894.12 | 41.17 W | 30.84 | 135.92 |
| 7974.00 | 70.00 | 189.90 | 7907.18 | 46.49 W | 32.52 | 163.48 |
| 8005.00 | 79.80 | 187.50 | 7915.25 | 50.99 W | 32.48 | 193.03 |
| 8029.00 | 87.39 | 185.60 | 7917.92 | 53.71 W | 32.59 | 216.71 |

Projection to T.D.

All data is in feet unless otherwise stated.
Coordinates from slot #1 and TVD from RKB-GL=11' (4953.00 Ft above GL).
Bottom hole distance is 223.27 on azimuth 193.92 degrees from wellhead.
Vertical section is from N 0.00 E 0.00 on azimuth 180.00 degrees.
Calculation uses the minimum curvature method.

Presented by Baker Hughes INTEQ

| Comments in wellpath | | |
|----------------------|---------|-------------------------------------|
| ===== | | |
| MD | TVD | Rectangular Coords. |
| ----- | | |
| 8029.00 | 7917.92 | 216.71 S 53.71 W Projection to T.D. |

NO Targets associated with this wellpath