



GEOLOGICAL WELL REPORT

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COLO. OIL & GAS CONS. COMM.

CHANDLER & ASSOCIATES, INC.  
SOUTHWEST RANGELY FEDERAL 12-34-1N-3  
NW SW SEC. 34-T1N-R103W  
RIO BLANCO COUNTY, COLORADO

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COLO. OIL & GAS CONS. COMM.

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November 17, 1989

H

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SOUTHWEST RANGELY FEDERAL 12-34-1N-3  
NW SW SEC. 34-T1N-R103W  
RIO BLANCO COUNTY, COLORADO

ELEVATIONS: KB 5713', GL 5701'

SURVEY: 1290' FSL, 1133' FWL

SPUD DATE: November 5, 1989

SURFACE CASING: Set 8-5/8" at 396' KB with 285 sacks of cement.

DRILLING FLUID: Air/mist with 2% KCl water to 3389';  
KCl mud to TD.

CORES: None

TESTS: DST #1 in the lower Mancos "B" sand.

LOG SURVEYS: Atlas Wireline DIL/GR and CNL Densilog/GR.

TOTAL DEPTH: 4565' Driller and Logger.

STATUS: Plugged and abandoned November 14, 1989.

CONTRACTOR: Chandler Drilling Corp., Rig 7;  
TP Darrel Fladeland.

GEOLOGIST: Pleas Stringer

| <u>LOG TOPS:</u>   | <u>DEPTH:</u> |
|--------------------|---------------|
| Rimrock ss         | 2788'         |
| Mancos sh          | 2881'         |
| Castlegate ss      | 3116'         |
| Mancos "B" ss      |               |
| Transition zone    | 4218'         |
| Upper Sand zone    | 4296'         |
| Main Porosity zone | 4332'         |
| Base of Mancos "B" | 4407'         |

SAMPLES: Disposed of at the drillsite.



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# SUMMARY OF FLARE AND FLUID DATA

| <u>DEPTH</u>         | <u>OPERATION</u> | <u>FLARE AND WATER FLOWS (6" Flow Line)</u>  |
|----------------------|------------------|--|
| 1294'                | Connection       | Small momentary flare. First water flow.   |
| 1326'<br>to<br>2032' | Connections      | 10-foot flares for 2 - 3 mins. while unloading the hole.   |
| 2063'                | Connection       | 12-15-foot flares for 10 mins. while unloading the hole following a 30 min. survey. Water flow increased to an estimated 50 BPH. |
| 2246'                | Connection       | 8-10-foot flares for a few seconds while unloading the hole.   |
| 2650'                | Drilling         | Water flow increased to an estimated 85 BPH.   |
| 2760'                | Connection       | 5-foot flares for a few seconds while unloading the hole   |
| 3036'                | Connection       | 5-foot flares for a few seconds while unloading the hole.  |
| 3068'                | Connection       | 2-3-foot flares for a few seconds while unloading the hole.  |
| 3389'                | Drilling         | Water flow increased to an estimated 125 BPH.  |

# DRILLING PROGRESS SUMMARY

|          |                                       |                        |
|----------|---------------------------------------|------------------------|
| 11- 5-89 |                                       | Spudded at midnight.   |
| 11- 6-89 | Ø 142'.                               | Ran surface casing.    |
| 11- 7-89 | Depth 410'. Testing BOP.              |                        |
| 11- 8-89 | Ø 1605'.                              |                        |
| 11- 9-89 | Ø 2731'.                              |                        |
| 11-10-89 | Prep to mud up at 3389'.              |                        |
| 11-11-89 | Ø 3652'.                              |                        |
| 11-12-89 | Ø 4154'.                              |                        |
| 11-13-89 | TD 4565'. Conditioning hole for logs. | Ran logs.              |
| 11-14-89 | TD 4565'. Running DST #1.             | Plugged and abandoned. |

SAMPLE LITHOLOGIC DESCRIPTION

Depths are adjusted to the electric logs.

2750-2788' Sandstone: light gray, very fine grained, well sorted, angular, clay filled, scattered carbonaceous material, firm, poor porosity, no shows;  
Sandstone: medium gray, very fine grained, well sorted, angular, shaly, firm, poor porosity, no shows.

RIMROCK SS

2788-2848' Sandstone: light gray, very fine - medium grained, poorly sorted, angular - subangular, some clay filling, scattered carbonaceous material, friable, good porosity, no shows.

2848-2854' Limestone: buff, very fine crystalline, scattered carbonaceous material, sandy, firm, tight, no shows.

2854-2881' Sandstone: light gray, very fine - medium grained, poorly sorted, angular - subangular, some clay filling, scattered carbonaceous material, friable, good porosity, no shows.

MANCOS SH

2881-2910' Shale: dark gray, calcareous, firm, fissile;  
Siltstone: dark gray, firm.

2910-3116' Shale: dark gray, calcareous, firm, fissile.

CASTLEGATE SS

3116-3140' Sandstone: light gray, very fine grained, well sorted, angular, partly clay filled, scattered shale fragments and carbonaceous material, hard - firm, tight - poor porosity, no shows.



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- 3140-3166' Sandstone: medium gray, very fine grained, well sorted, angular, partly clay filled, shaly, rare glauconite, firm - friable, poor porosity, no shows.
- 3166-3229' Siltstone: medium gray, some shale laminations, some carbonaceous material, hard.
- 3229-3260' Shale: dark gray, calcareous, firm, fissile.
- 4150-4218' Shale: dark gray, calcareous, firm, fissile;  
Siltstone: dark gray, hard.

MANCOS "B" TRANSITION ZONE

- 4218-4272' Siltstone: medium gray, some shale laminations, clay filled, scattered carbonaceous material, hard.
- 4272-4296' Sandstone: light gray, very fine - fine grained, poorly sorted, angular - subangular, clay filled, scattered carbonaceous material, hard, tight, no shows.

UPPER SAND ZONE

- 4296-4300' Sandstone: light gray, very fine - fine grained, poorly sorted, angular - subangular, clay filled, scattered carbonaceous material, firm, tight, no shows.
- 4300-4307' Sandstone: light gray, very fine - fine grained, poorly sorted, angular - subangular, clay filled, scattered carbonaceous material and shale fragments, occasional glauconite, firm, tight, no shows.
- 4307-4323' Sandstone: light gray, very fine grained, well sorted, angular, clay filled, scattered carbonaceous material, friable, poor porosity, no shows.

4323-4332' Sandstone: light - medium gray, very fine grained, well sorted, angular, clay filled, shaly in part, scattered carbonaceous material, even dull gold mineral fluorescence, hard, tight, no shows.

MAIN POROSITY ZONE

4332-4340' Sandstone: light gray, very fine grained, well sorted, angular, clay filled, scattered carbonaceous material, occasional glauconite, firm, poor porosity, no shows.

4340-4350' Sandstone: as above, no shows;  
Bentonite: light gray.

4350-4374' Sandstone: light gray, very fine grained, well sorted, angular, clay filled, scattered carbonaceous material, rare glauconite, hard - friable, tight - fair porosity, no shows.

4374-4407' Sandstone: light gray, very fine grained, well sorted, angular, clay filled, scattered carbonaceous material, some shale laminations, hard - friable, tight - poor porosity, no shows.

4407-4565' Shale: dark gray, calcareous, firm, fissile.



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DRILLSTEM TEST DATA

DST #1 4305-4565'. Conventional test by Scott Pitt, Schlumberger  
Testing Co.

Open 30 mins, - SI 60 mins. - open 90 mins. -  
SI 172 mins.

First Open: 2" blow increased to 8" in 10  
mins. then gradually decreased to 3" in 30 mins.  
Blow died 12 mins. after tool shut-in.

Second Open: 1" blow increased to 1-1/2" in 10  
mins, decreased to 1/4" in 70 mins, to a surface  
blow in 80 mins. and continued a surface blow  
until tool was shut-in. Blow then died immediately.

Pipe Recovery: 31 ft. mud.

Sampler Recovery: Trace of mud with .25 cu. ft.  
of gas. Pressure in sample chamber: 20 ppsi.  
BHT: 118°.

|            |      |         |
|------------|------|---------|
| Pressures: | IHP  | 2212#   |
|            | IFP  | 100-91# |
|            | ISIP | 152#    |
|            | FFP  | 85-90#  |
|            | FSIP | 171#    |
|            | FHP  | 2169#   |

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# BIT RECORD

| <u>BIT NO.</u> | <u>SIZE</u>        | <u>MAKE</u> | <u>TYPE</u> | <u>DEPTH OUT</u> | <u>FEET</u> | <u>HOURS</u>     |
|----------------|--------------------|-------------|-------------|------------------|-------------|------------------|
| 1              | 12 $\frac{1}{4}$ " | Reed        | Y-13        | 410'             | 398'        | 12 $\frac{1}{2}$ |
| 2              | 7-7/8"             | Reed        | HPSM        | 3389'            | 2979'       | 65               |
| 3              | 7-7/8"             | Reed        | HP-52       | 4565'            | 1176'       | 58               |

# MUD RECORD

Mud checks made by Craig Hart, Mustang Drilling Fluids.  
Mudded up at 3389' with KCl mud.

| <u>DEPTH</u> | <u>WT</u> | <u>FV</u> | <u>PV</u> | <u>YP</u> | <u>GS</u> | <u>PH</u> | <u>WL</u> | <u>FC</u> | <u>CHLORIDES</u> |
|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|
| 3389'        | 8.7       | 36        | 11        | 5         | 1/2       | 10.8      | 12.0      | 2/32      | 15,000           |
| 3720'        | 8.7       | 38        | 11        | 11        | 2/4       | 10.1      | 9.2       | 2/32      | 15,600           |
| 4196'        | 9.1       | 38        | 12        | 11        | 2/5       | 9.2       | 9.4       | 2/32      | 12,800           |
| 4565'        | 9.4       | 51        | 18        | 15        | 6/13      | 9.0       | 9.4       | 2/32      | 15,000           |

# SURVEY RECORD

| <u>DEPTH</u> | <u>DEVIATION</u>  |
|--------------|-------------------|
| 396'         | 1 $\frac{1}{4}$ ° |
| 2022'        | 2°                |
| 4525'        | 3 $\frac{1}{2}$ ° |

# PLUGGING RECORD

45 sacks - 4415-4565'  
35 sacks - 3050-3150'  
35 sacks - 350- 450'  
25 sacks - at the surface with a marker.

Respectfully submitted,

*Pleas Stringer*

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