

# DRILLING & COMPLETION HISTORY

CONSOLIDATED OIL & GAS, INC.

BAIRD NO. 1-4

San Juan County, New Mexico  
May 1, 1962

|                          |  |             |         |
|--------------------------|--|-------------|---------|
| Location:                | 1775' F/NL, 790' F/EL, Section 4<br>T31N-R13W, NMPM  |             |         |
| Elevations:              | 5850' GL<br>5862' KB - all measurements from KB  |             |         |
| Spud:                    | February 21, 1962  |             |         |
| Drilling Completed:      | March 15, 1962   |             |         |
| Well Completed:          | April 18, 1962   |             |         |
| Total Depth:             | 6850' Drilled<br>6838' Plug Back   |             |         |
| Casing:                  |  |             |         |
| Surface:                 | 9 5/8" 36# J-55 cemented at 196' with<br>175 sx. regular 2% CaCl <sub>2</sub> ceme nt.   |             |         |
| Production:              | 5 1/2" 15.5# J-55 cemented at 6863'<br>with 126 sx. regular 4% gel with 63<br>cu. ft. Strata-crete and thru stage<br>collar at 4677' with 175 sx. regular<br>4% gel. 50/50 Pozmix. |             |         |
| Tubing:                  | 1 1/2" EUE landed at 6647'<br><br>1" regular V-50 set at 4468'   |             |         |
| Logs:                    | Welex Accoustic Velocity & Induction   |             |         |
| Cores & Drillstem Tests: | None   |             |         |
| Formation Tops: Log      | Mesaverde  | 2055'       | (+3807) |
|                          | Cliffhouse   | 3692'       | (+2170) |
|                          | Menefee  | 3938'       | (+1924) |
|                          | Pt. Lookout  | 4521'       | (+1341) |
|                          | Mancos   | 4860'       | (+1002) |
|                          | Greenhorn  | 6529'       | (- 667) |
|                          | Dakota   | 6695'       | (- 833) |
| Producing Perforations:  | DK   | MV          |         |
|                          | 6706'-6722'  | 4524'-4552' |         |
|                          | 6729'-6744'  | 4564'-4583' |         |
|                          | 6753'-6768'  | 4592'-4618' |         |
|                          | 6793'-6800'  |             |         |
|                          | 6817'-6824'  |             |         |
| Treatment: DK            | Sand water frac with 80,000 lbs. of<br>sand and 118,600 gal. water.  |             |         |
| MV                       | Sand water frac with 100,000 lbs. of<br>sand and 100,800 gal. water.   |             |         |
| Initial Potential: DK    | Flow volume thru 3/4" choke: 2510 MCFD   |             |         |
| MV                       | Flow volume thru 3/4" choke: 240 MCFD<br>Calculated Absolute Open Flow Potential:<br>512 MCFD  |             |         |

WELL: BAIRD NO. 1-4  
 1775' F/NL, 790' F/EL, Sec. 4-T31N-R13W  
 FIELD: Basin Dakota-Blanco Mesaverde  
 COUNTY: San Juan STATE: New Mexico  
 ELEVATIONS: 5850' GL  
 5862' KB

2/21/62

14 hours rigging up, 4 hours drilling mouse hole, 2 hours drilling rat hole, 3 hours drilling surface hole. Presently drilling 13 3/4" surface hole at 65'.

2/22/62

Drilled 131' of 13 3/4" hole to depth of 196'. Dev. 3/4" at 90', 3/4" at 180'. Ran 7 joints of 9 5/8" range two casing set at 196' KB, 185' GL. Cemented with 175 sx. regular 2% CaCl<sub>2</sub> cement. Plug down 11 p.m. 2/21. Good returns on cement, left 20' of cement inside of pipe. Nipped up in preparation to drill out cement.

2/23/62

Pressured up on casing to 600# for five minutes. Drilled out from under surface. Depth 1852'. Drilled 1649'. Drilling with Bit 2 with water. Dev. 1 1/2" at 1150', 3/4" at 1740'. Presently drilling.

2/24/62

Depth 2700'. Drilled 847' of sand and shale. Drilling with Bit 4 and clear water. Dev. 1" at 2400', presently drilling.

2/25/62

Depth 3244'. Drilled 544' of sand and shale. Drilling with water. Presently making rip for Bit 6. Dev. 1 1/4" at 3100'.

2/26/62

Depth 3564'. Drilled 320' of sand and shale. Presently making trip for Bit 8. Drilling with water. Dev. 1 1/4" at 3460'.

2/27/62

TD 3780'. Drilled 226' of sand and shale. Tripping for Bit 10, drilling with water.

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WELL: BAIRD NO. 1-4  
 2/28/62 Depth 3955', drilled 175' of sand and shale. Drilling with Bit 12 and water. Washed 150' to bottom on last trip, will start to mud up today.  
 2/29/62 Depth 4320'. Drilled 365' of sand and shale. Drilling with Bit 13. Mudded up yesterday. Mud 8.8. Vis. 43. Water loss 22. Mud cake 2/32. PH 9. Sand content 1/4%. Dev. 3/4" at 4200'.  
 3/2/62 Depth 4500'. Drilled 180' of sand and shale. Presently making trip for Bit 15. Mud 9. Vis. 42. Water loss 12. Mud cake 2/32. PH 8. Sand content 1/4%. Twisted off drill pipe at 4348'. Left 19 drill collars and one piece of drill pipe in hole, recovered OK.  
 3/3/62 Depth 4745', drilled 245' of sand and shale. Drilling with Bit 16. Mud 9.2. Vis. 36. Water loss 10. Mud cake 2/32.  
 3/4/62 Depth 4853'. Drilled 108' of sand and shale. Drilling with Bit 18. Mud 9.3. Vis. 37. Water loss 11. Mud cake 2/32. PH 8.6. Sand content 1/2%.  
 3/5/62 Depth 4927'. Drilled 74' of sand. Tripping for Bit 20. Mud 9.4. Vis. 37. Water loss 12. Mud cake 2/32. PH 9. Sand content 1/2%. Dev. 1" at 4900'.  
 3/6/62 Drilling at 5210'. Drilled 283' of sand and shale. Drilling with Bit 21. Mud 9.5. Vis. 42. Water loss 14. Mud cake 2/32. PH 9.5. Sand content 1/2%.  
 3/7/62 Depth 5475'. Drilled 265' of sand and shale. Drilling with Bit 22. Mud 9.4. Vis. 41. Water loss 12. Mud cake 2/32. PH 9.4. 1/2% oil. Dev. 1 1/2" at 5420'.  
 3/8/62 Depth 5770'. Drilled 292' of sand and shale. Drilling with Bit 24. Mud 9.6. Vis. 38. Water loss 13. Mud cake 2/32. PH 9.5. Sand content 3/4%.

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3/9/62

Depth 6165'. Drilled 395' of sand and shale. Drilling with Bit 25. Mud 9.7. Vis. 40. Water loss 13. Mud cake 2/32. PH 9.8. Sand content 3/4%. Dev. 1 1/4" at 6140'.

3/10/62

Depth 6335'. Drilled 170' of sand and shale. Drilling with Bit 27. Mud 9.5. Vis. 40. Mud cake 2/32. PH 8.5. Sand content 3/4%.

3/11/62

Depth 6462'. Drilled 107' of sand and shale. Making trip for Bit 29. Vis. 45. Mud 9.8. Water loss 12. PH 8.8. Mud cake 2/32. Sand content 1%.

3/12/62

Depth 6685'. Drilled 243' of sand and shale. Vis. 45. Mud 9.9. Water loss 10. PH 8.9. Mud cake 2/32. Making trip for Bit 20.

3/13/62

Depth 6771'. Drilled 86' of sand. Making trip for Bit 32. Mud 9.9. Vis. 75. Water loss 10. Mud cake 2/32. PH 9. Sand content 1%. Dev. 1 1/2" at 6720'. Lost 75 bbls. mud at 6716'.

3/14/62

Depth 6845'. Drilled 74' of sand and shale with Bit 33. Mud 9.9. Vis. 110. Water loss 8.7. Mud cake 2/32. PH 9. Sand content 1%. Proposed TD before logging, 6850'.

3/15/62

Drill to 6850'. Came out of hole logged well, went back in hole with drill pipe and bit, drilled to 6867'. Circulated hole, came out of hole laying down drill pipe. Preparing to run 5 1/2" casing.

3/16/62

Ran 225 joints of 5 1/2" OD 8 round J-55 condition B cemestee casing, set at 6863.55' KB. Float collar at 6840.47' KB, first centralizer on shoe joint, second centralizer at 6530', third centralizer at 4678' fourth at 4470'. Baker stage collar at 4677.55' KB, with basket under stage collar. First stage cement over DK with 126 sx. regular 4% gel. with 63 cu. ft. Strata-crete. Plug down at 4:30 p.m. 3/15. Bumped plug with 1400#, released pressure, float held. Good circulation throughout cement job.

Second stage cement over MV with 175 sx. regular 4% gel. 50/50 Pozmix. Started cement at 6 p.m. 3/15. Plug down at 6:30 p.m. Bumped plug with

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3/16/62 Cont'd.

2000#, released pressure, float held OK. Good circulation throughout cement job. Rotary rig released at 7 p.m. 3/15.

3/17/62

Waiting on rotary rig to move.

3/18/62

Waiting for rotary rig to move.

3/19/62

Waiting on rotary rig to move.

3/20/62

Waiting on completion rig.

3/21/62

Waiting on completion rig.

3/22/62

Will move in completion rig today.

3/23/62

Rigging up completion rig, will start completion today.

3/24/62

Ran bit to stage collar at 4678', pressured up to 1100# with rig pump. Drilled stage collar. Finished running tubing and bit to 6841' (float collar), pressured up with Dowell to 2200#. Spotted 1,000 gal. BDA. Ane out of hole, ran Correlation log. 6837' to 6500'. Perforated 6817'-6824', 6793' - 6800', six per foot. Breakdown pressure 1800# pumps 330 gal. breakdown first stage acid three barrels per minute, no break back. Second stage acid 1800# 330 gals. no break back. Third stage acid 1800# 330 gals. no break back. 20 minutes between stages. Rigged up Dowell, three Allison's.

|              |                            |            |
|--------------|----------------------------|------------|
| First Stage: | Break down pressure        | 2400#      |
|              | Maximum treatment pressure | 2400#      |
|              | Maximum pressure flush     | 2900#      |
|              | Minimum treatment pressure | 2100#      |
|              | Over treatment pressure    | 2250#      |
|              | Instant shut-in pressure   | 1500#      |
|              | Ten minute shut-in         | 1050#      |
|              | Breakdown and fill         | 3260 gal.  |
|              | Treatment fluid            | 43000 gal. |
|              | Over flush                 | 1140 gal.  |

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3/24/62 Cont'd.

First Stage Cont'd.

|                 |        |
|-----------------|--------|
| Number of Balls | 20     |
| Injection Rate  | 32 BPM |

3/25/62

Set Baker top drilling wgn. bridge plug at 6780'. Perforated 6753'-6768', 6729'-6744', 6706'-6722', six per foot super dyna-jets.

Second Stage: Rigged up Dowell 276 holes

|                                    |              |
|------------------------------------|--------------|
| Breakdown pressure                 | 2000#        |
| Maximum treatment pressure         | 2400#        |
| Minimum treatment pressure         | 1800#        |
| Over treatment pressure            | 2000#        |
| Instant shut-in pressure           | 1500#        |
| Ten minute shut-in pressure        | 1100#        |
| Breakdown and fill                 | 80 bbls.     |
| Treating fluid                     | 75,600 gal.  |
| Over flush                         | none         |
| Disp.                              | 160 bbls.    |
| Pounds of sand                     | 40,000 40-60 |
|                                    | 40,000 20-40 |
| 2 1/2# J-100 per 1,000 gal. water. |              |
| Injection rate                     | 37 BPM       |

Third Stage: MV. Set Baker top drilling bridge plug at 4650'. 146 holes. Perforated 4592'-4618', 4564'-4583', 4524'-4552', two per foot super dyna-jets. Rigged up Dowell (3) Allison

|                             |                |
|-----------------------------|----------------|
| Breakdown pressure          | 3100# to 1800# |
| Maximum treating pressure   | 2400#          |
| Minimum treating pressure   | 1700#          |
| Over treatment pressure     | 1950#          |
| Instant shut-in pressure    | 1400#          |
| Ten minute shut-in pressure | 1000#          |
| Breakdown and fill          | 1680 gals.     |
| Treating fluid              | 100,800 gals.  |
| Over flush                  | none           |
| Disp.                       | 5,040 gals.    |
| Pounds of sand              | 100,000 20-40  |
| Number of balls             | 85             |
| Injection rate              | 41 BPM         |

Started in hole with 4 3/4" bit blowing down with gas at 7:30 p.m. 3/24. Presently blowing well at 3100', with gas, well making lot of sand and water.

3/26/62

Blew well to 4550', hit sand, cleaned out sand to 4650' to the plug. Blew well at this depth for 3 hours, having gas line troubles, rocks in gas line. Started blowing well at 7 a.m. 3/26. Presently blowing at

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4/2/62

MV shut-in, DK blowing and cleaning during day time, shut-in at night.

4/3/62

MV shut-in pressure 475#, DK shut-in pressure 15 hours 1250#. Dakota gauged 1020 MCFD after 8 hours of flow. DK clean of water and sand will turn DK into MV side to unload MV of water.

4/4/62

17 hour shut-in pressure MV casing 540#, DK tubing 1300#. turned DK into MV casing. Opened MV to atmosphere, after 8 hours flow, well making 1020 MCFD.

4/5/62

18 hours shut-in pressures DK 1410#. MV 680#. Flowed well to 4 p.m. 8 hours. DK 1020 MCFD. MV and DK shut-in, DK ready to test.

4/6/62

After 17 hours shut-in MV casing pressure 450#, DK tubing pressure 1470#. Opened MV for 4 hours, well would not flow. Turned DK through MV casing, left well flowing over night.

4/7/62

16 hours shut-in. Dakota 1500. Mesaverde 450. Turned DK into MV casing in attempt to clean Mesaverde side.

4/8/62

Flowing MV with DK turned in casing. Gas TSTM. Making occasional slugs of water.

4/10/62

Shut in pressure 24 hours, DK 1525#, MV 690#. turned DK through MV at 9 a.m., unloaded some water. After flowing well for 7 hours, gas flow TSTM.

4/11/62

Well flowing with Dakota turned through Mesaverde casing. Making 3/4" stream of water. GAS TSTM. 600# Mesaverde casing pressure.

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3/26/62 Cont'd.

4250', MV making 2" stream of water and some gas, too small to measure.

3/27/62

Blew well on down to 4650' to Baker plug. Blew from this depth 7 hours, well making very small amount of sand with 3/4" stream of water with supply gas on. Shut supply gas off for 30 minutes well gauged 277 MCFD. Drilled Baker plug at 4650'. DK water backed them up to one stand of surface. Started blowing hole down at 9 p.m. 3/26. Present operation, blowing hole down at 6500', well making lot of water and very little sand.

3/28/62

Blowing well at 6790' pushing bridge plug to bottom. Making 1 1/2" stream of water and small amount of sand, estimated 400 MCFD formation gas. Will probably blow well till noon today then test and run tubing and packer. Drilled bridge plug at 6780', knocked top of plug loose, incoming water logged well off, pulled tubing to 4380' would not blow from 4380'. Pulled tubing, found plugged bit (2 hours rig down time). Blew well back down to bridge plug. Drilled on bridge plug for 2 hours before coming loose.

3/29/62

Going in hole with tubing and magnet to recover lost cone at 6820'. Pushed plug to 6820' drilled on plug for 1 hour, drilling bit broke down from 11 a.m. to 4 p.m. At 11:30 a.m. after supply gas shut off for 30 minutes, gauged 1500 MCFD. Prepared drilling bit, drilled at 6820' for 1 hour, bit started torquing. Started pulling tubing at 3 p.m. rig engine broke down, finished pulling tubing at 5 a.m., found one cone off bit.

3/30/62

Recovered cone. Ran new bit, finished cleaning out to PBTD of 6838'. Laying down 2 7/8" completion string.

3/31/62

Finished laying down 2 7/8" tubing at 10:30 a.m. Wait on Welox until 2 p.m. Ran Baker Model D production packer, no flipper valve, set at 6650' KB. Ran 202 joints 1 1/2" tubing, 6623.98' 1-1 1/2 x 10' total of 6636', landed at 6647' KB set in packer with 8000 lbs. Ran 136 joints 1" V-50 (4437.73') set at 4468' KB. Pump out-pump out plug. Shut both cones in, moving out rig. Rig released at 5 a.m. 3/31/62.

4/1/62

Shut-in, will open DK today.

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4/12/62

MV making 1/2" stream of water with DK turned through MV casing, pressure 580#.

4/13/62

Well making 1/2" stream of water, gas TSTM. DK turned in MV casing.

4/14/62

Well shut-in for 7 day test.

4/17/62

Will test DK today.

4/18/62

DK 3 hour test through 3/4" choke, 2640 MCFD.

4/19/62

Shut-in for MV test.

4/20/62

Shut-in for test.

4/21/62

Shut in for test.

4/22/62

Shut in for test.

4/23/62

Shut-in for test.

4/24/62

Shut-in for test.