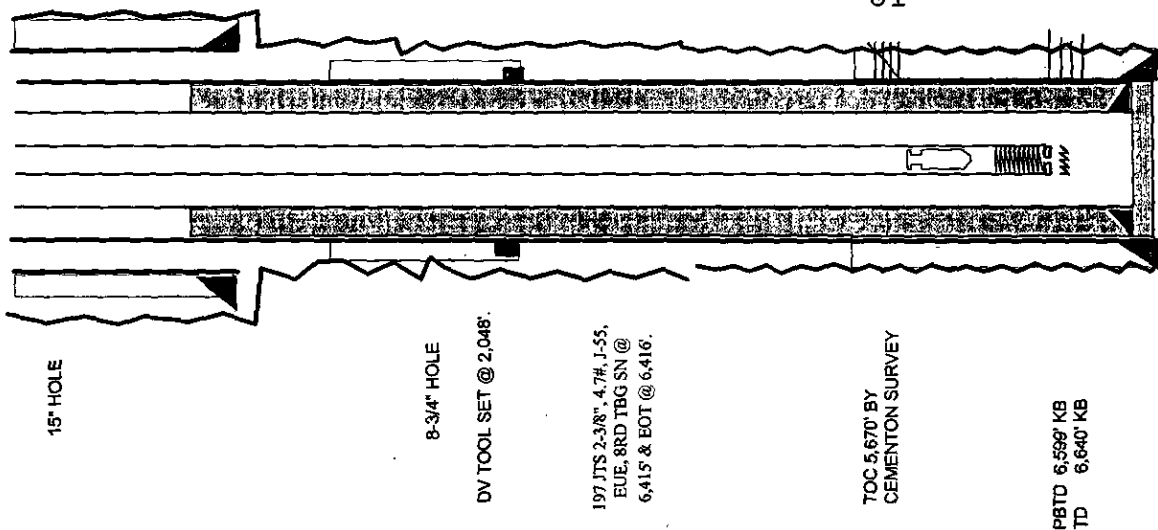


KRAUSE WN FEDERAL WELL #1 WELLBORE DIAGRAM

30-045-06972

ELEV 6,046' KB
6,035' CL
11' KB



15' HOLE

8-3/4\"/>

DV TOOL SET @ 2,048'

197 JTS 2-3/8\"/>

TOC 5,670' BY
CEMENTON SURVEY

PBTD 6,599' KB
TD 6,640' KB

10-3/4\"/>

SET 7\"/>

TOC 1,640' BY TS.

1 JT 4-1/2\"/>

GALLUP PERFS: 5,848'-62\"/>

DAKOTA PERFS: 6,328'-38\"/>

DATA

LOCATION: 790' FSL & 990' FWL SEC 32, T 28 N, R 11 W
COUNTY/STATE: SAN JUAN, NEW MEXICO

FIELD: KUTZ GALLUP
BASIN DAKOTA

FORMATION: GALLUP / DAKOTA FEDERAL LEASE#: NMSF 078863

SPUD DATE: 12/16/59 COMPLETION DATE: 4/1/60

IP: GP: 130 BOPD, 5/8\"/>

DK: F. 3,646 MCFPD, FTP 286 PSIG, 3/4\"/>

API#: 30-045-06972 CTOWELL #: GP 70618 / DK 70617

TUBING STRING: GP: PARALLEL STRING ANCHOR LATCHING SUB, 2-3/8\"/>

PERF SUB, 1 JT 2-3/8\"/>

PERF: GP: 5,848'-62\"/>

DK: 6,328'-38\"/>

HISTORY

12/16/59: MIRU SAGE DRLG RIG. SPUDDED WELL FOR WESTERN NATURAL GAS COMPANY.

12/17/59: TD 15\"/>

01/12/60: TD 8-3/4\"/>

01/15/60: CO TO PBTD @ 6,599'.

01/16/60: TOC @ 5,670' BY CEMENTON SURVEY. PERF DK W/HYDR PERF TOOL FR/6,406'-16\"/>

01/17/60: BD PERFS @ 1,700 PSIG. F. PERFS FR/6,406'-66\"/>

01/18/60: PERF W/HALLIBURTON HYDR JET FR/6,328'-38\"/>

01/19/60: FRAC PERFS FR 6,328'-38\"/>

01/21/60: SPOTTED 200 GALS 15% ACID. PRESS UP TO 3,000 PSIG. COULD NOT PMP INTO PERFS FR/6,328'-38\"/>

01/22/60: FOUND RBP @ 6,321'.

KRAUSE WN FEDERAL WELL #1 WELLBORE DIAGRAM

01/23/60: TOH W/RBP. CO TO 6,500'. TIH W/PKR & TBG. SET PKR @ 6,252'. SWB WELL IN.

01/24/60: F. 0 BC, HEAVY SPRAY WTR, 1,700 MCF. SWI 3 HRS. SITP 1,725 PSIG. CO TO 6,550'. SET BAKER MODEL "D" PKR @ 6,250' W/DR PLUG.

01/26/60: PERF GP W/HALLIBURTON 2 STAGE JET TOOL FR/5,848'-62' W/4 JS EVER OTHER FOOT (32 TTL HOLES). SPOTTED 500 GALS MUD ACID.

01/27/60: BD PERFS FR/5,848'-62' @ 1,300 PSIG. F. PERFS FR/5,848'-62' W/40,000 GALS OIL & 40,000# 20-40 SD @ 40.9 BPM & 1,700 PSIG. 45" SIP 875 PSIG.

01/31/60: LANDED DK TBG AS FOLLOWS: 2-3/8" X 6' TBG SUB W/PIN COLLAR, SEAL ASSBLY, 15 JTS 2-3/8", 4.7# J-55, EUE, 8RD TBG, PARALLEL STRING ANCHOR, 199 JTS 2-3/8", 4.7# J-55, EUE, 8 RD TBG & 2-3/8" X 6' TBG SUB W/N-80 TURNED DOWN CPLGS. EOT SET @ 6,260'. BAKER MODEL "D" PKR SET 6,250'. PARALLEL STRING ANCHOR SET 5,814'. LANDED GP TBG AS FOLLOWS: PARALLEL STRING ANCHOR LATCHING SUB, 2-3/8" X 6' PERF SUB, 1 JT 2-3/8", 4.7# J-55, EUE, 8RD TBG W/TURNED DWN COLLARS, SN & 192 JTS 2-3/8", 4.7# J-55, EUE, 8RD TBG SET IN PARALLEL ANCHOR @ 5,814'. SN SET @ 5,773'. RBMO PU.

02/05/60: SWI 93 HRS. SITP (DK) 2,075 PSIG. SITP (GP) 300 PSIG. SICP 725 PSIG.

03/21/60: DK: SITP 1,936 PSIG. BHP 2,388 PSIG @ 6,160' KB. BHT 166 DEG F. IP DK: F. 3,646 MCFPD, FTP 286 PSIG, 3/4" CK, 3 HRS. CAOF 3,984 MCFPD.

03/28/60: GP: BHP 1,598 PSIG, @ 5,800'. BHT 164 DEG F.

04/01/60: IP GP: 130 BOPD, 5/8" CK.

11/23/63: SINCLAIR OIL & GAS COMPANY ASSUMED OPERATORSHIP OF WELL.

02/24/67: AMOCO PRODUCTION COMPANY ASSUMED OPERATORSHIP OF WELL.

01/01/98: CTOC ASSUMED OPERATORSHIP OF WELL.

01/14/00: GP: SITP 0 PSIG, SICP 289 PSIG. SHOT FL @ 729' FS. FL 5,044' ASN & 5,119' ATP.

02/08/00: GP: SITP 0 PSIG, SICP 220 PSIG. MIRU SU. BFL 500' FS. S. 4 BO, 29 BW, 3 HRS (5 RUNS). FFL 1,400' FS. WELL ON VAC AFTER EACH RUN. CUT HEAVY PARAFFIN FR/2,300' TO 3,300' FS.

02/09/00: BFL @ 700' FS. S. 176 BW, 11.5 HRS (27 RUNS). FFL @ 3,500' FS. TBG WENT ON VAC AFTER EACH RUN. SICP 32 PSIG. RBMO SU.

11/16/02: BUILT COMP PAD & SET NEW SCS WH RECIP COMP (ARROW 330, 2STG).

04/07/04: MIRU JIMMY'S SWB RIG. RU SWB. BFL @ 5,100' FS. S. 0 BO, 48 BW, 16 RUNS (7 HRS). FFL @ 5,300' FS. TBG ON VAC AFTER EACH RUN.

05/12/04: MIRU HURRICANE RIG #2. ND WH. NU BOP W/OFF-SET SPOOL. PLD OUT STRG LATCHING SUB FR/PARALLEL STRG ANCHOR. TOH W/193 JTS 2-3/8" TBG, SN, 2-3/8" X 6' PERF SUB & STRG LATCHING SUB.

05/13/04: RIH W/CHEM CUTTER & CUT OFF 2-3/8" TBG @ 5,850'. RBMO WL

W/NC, SN W/SV & 193 JTS TBG. RPLD 55 BAD TBG COUPLINGS. LOADED TBG W/10 BBLs 2% KCL WTR. PT TBG TO 1,500 PSIG FOR 10". HELD OK. RLSD PRESS.

05/21/04: TIH W/30 JTS TBG. WO FISH FR/6,203' TO 6,250' TO MODEL "D" PKR. CIRC ON BTM FOR 2 HRS. TOH W/200 JTS 2-3/8" TBG & BHA. TIH W/OS, XO, JARS, BMP SUB, 6 - 3-1/2" DCS, XO & 198 JTS TBG. TGD TOF @ 6,184'. CAUGHT & JARRED FISH FREE. TOH W/198 JTS TBG, BHA & FISH (2-3/8" X 10 CO, 2 JTS 2-3/8" TBG, PKR SEAL ASSY, 2-3/8" X 6' TBG SUB & PIN COLLAR).

05/27/04: TIH W/199 JTS TBG. TOH & LD 199 JTS 2-3/8" TBG. MIRU STINGER 7" FRAC VLV. RBMO HURRICANE RIG #2.

08/27/04: MIRU HURRICANE RIG #2. PU & TIH W/RET TL FOR 7" RBP & 196 JTS 2-7/8" TBG. TGD BTM @ 6,192'. CIRC & CO FILL FR/6,192' - 6,212'. CAUGHT & RLSD RBP. TOH W/197 JTS 2-7/8" TBG, RET TL & RBP. TIH W/2-7/8" BLADE BIT, XO, 1 JTS 2-3/8" TBG, XO & 100 JTS 2-7/8" TBG. SET CMT RETR @ 5,746'.

09/04/04: TIH W/7" CMT RETR & 181 JTS 2-7/8" TBG. SET CMT INTO CMT PPD DWN TBG & CIRC WELL 15". PU 1 JT TBG. STING INTO CMT RETR. MIRU BJ SERV CMT PMP TRKS. PPD DWN TBG W/25 BFW @ 2.5 BPM & 950 PSIG, 31 BBLs (130 SXS) TYPE III CMT W/1% CACL2. FLSD W/33 BFW @ 1.7 BPM & 1,684 PSIG. ISIP 1,260 PSIG. STING OUT OF CMT RETR. TOH W/181 JTS 2-7/8" TBG. TIH W/6-1/4" BIT, XO, 6 - 3-1/2" DCS & 90 JTS TBG.

09/09/04: TIH W/6-1/4" BIT, XO, 4 - 3-1/2" DCS & 176 JTS 2-7/8" TBG. TGD TOC @ 5,726' (20' OF CMT). RU PWR SWIVEL. DO CMT FR/5,726' - 5,746' (CMT RETR). DRLD 4.5 HRS TO DO CMT RETR. DO CMT FR/5,749' - 5,799'. CIRC ON BTM 1 HR. TOH W/4 JTS TBG.

09/11/04: TIH W/PKR RET SPEAR GRAPPLE, PKR ML SHOE, CANFIELD BUSHING, JARS, XO, 4 - 3-1/2" DCS, XO & 194 JTS 2-7/8" TBG. TGD MODEL "D" PKR @ 6,250'. RU PWR SWIVEL & DO PKR. TOH W/194 JTS 2-7/8" TBG, BHA & MODEL "D" PKR. TIH W/6-1/8" BIT, XO, 4 - 3-1/2" DCS & 120 JTS 2-7/8" TBG.

09/15/04: TIH W/24 JTS 2-7/8" TBG. TGD PBD @ 6,630'. CIRC 1 HR. TOH & LD 213 JTS 2-7/8" TBG, XO, 4 - 3-1/2" DC & 6-1/8" BIT. MIRU CHAPARAL CSG CREW. PU & TIH W/WEATHERFORD 4-1/2" FLOAT SHOE, 1 JT 4-1/2", 10.5#, J-55, ST&C CSG, WEATHERFORD 4-1/2" FLOAT COLLAR, 8 JTS 4-1/2", 10.5#, J-55, ST&C CSG, 1 JT 4-1/2", 10.5#, J-55, ST&C CSG, 50 JTS 4-1/2", 10.5#, J-55, ST&C CSG, WEATHERFORD 4-1/2" 2-STAGE TL, 96 JTS 4-1/2", 10.5#, J-55, ST&C CSG & 2 JTS 4-1/2", 10.5#, J-55, ST&C CSG. LD CSG W/DONUT: DV TL @ 4,104'. MARKER JT @ 6,174'. FC @ 6,576' & LANDED @ 6,620'. RBMO CHAPARAL CSG CREW. CIRC CSG W/2% KCL WTR.

09/16/04: MIRU BJ SERVICES CMT EQUIP. CMTD 4-1/2", 2ND STAGE PROD CSG (PBD 6,585'), (STAGE TL @ 4,116'). CMTD 1ST STAGE W/10 BBLs CC WTR, 5 BBLs FW, 10 BBLs FLOW GUARD, 2 BBLs FW, 165 SX PREMIUM LITE HS W/2%KCL, 1/4#SK CELLOFLAKE, 0.2% CD-32, 0.5% FL-52 & 2% PHENOSEAL. DISP W/105 BFW. CMTD 2ND STAGE W/10 BFW, 120 SX TYPE III CMT, W/8% BENTONITE, 1/4#SK CELLOFLAKE & 2% PHENOSEAL (MIXED @ 11.4 PPG, 3.03 CUFT/SK) FOLLOWED BY 100 SX TYPE III CMT (MIXED @ 14.5 PPG, 1.39 CUFT/SK). DISP W/65 BFW. RBMO BJ CMT EQUIP.

**KRAUSE WN FEDERAL WELL #1
WELLBORE DIAGRAM**

09/21/04: PERFD DAKOTA FR/6.466' - 6.454', 6.416' - 6.406' & 6.338' - 6.328' W/1 JSPF (OWEN HSC-3125-302, 10 GM CHRGS, 0.32" DIA., 14.3" PENE., 32 HOLES).

09/25/04: FRAC'D DK PERFS FR/6.328'-6.466' DWN 4-1/2" CSG W/67,119 GALS (BH FOAM VOL), 70Q PURGEL III LT CO2 FOAM PW FR/KUTZ J FEDERAL #2E (ZIRCONIUM XL 30# GIAR GEL, CARRYING 101,880# 20/40 SD (71,880# 20/40 OTTAWA SD + 30,000# 20/40 SUPER LC RC SD). ALL SD ON LOCATION PPD. FLSHD W/92 BBLs FOAM FLUSH. AIR 31.4 BPM. ATP 3,103 PSIG. MAX TP 3,577 PSIG. ISIP 1,749 PSIG. 5" SIP 1,172 PSIG. 10" SIP 1,076 PSIG. 15" SIP 997 PSIG.

09/29/04: TIH W/PMP BLR & 201 JTS 2-3/8" TBG. TGD BTM @ 6,518' (81' FILL). CO FILL FR/6.518' - 6.599'. TOH W/10 JTS TBG SD 1 HR. TIH W/10 JTS TBG. TGD BTM @ 6,597'. TOH W/203 JTS TBG & PMP BLR. TIH W/NC, SN & 195 JTS TBG. SN @ 6,338' & EOT @ 6,339'.

09/30/04: PU & TIH W/8 JTS TBG. TGD BTM @ 6,597' (2' FILL). POH & LD 6 JTS TBG. LANDED TBG W/DOUNT W/NIP AS FOLLOWS: 197 JTS 2-3/8", 4.7#, J-55, EUE, 8RD TUBOCRIBE TBG FR/TOOL PUSHERS. SN @ 6,415' & EOT @ 6,416'. ND BOP. NU WH.

10/02/04: V&R PROD INST NEW 2.3 DUAL FLOW L/C ON WH. SITP 150 PSIG, SICP 380 PSIG. DRPD NEW BHBS & NEW SGL PAD PLNGR.