

CHAMA PETROLEUM COMPANY

SOUTH BOYD #1

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- 9-1-83: Nippling up BOP at 1320', no footage in last 24 hrs., $\frac{1}{4}$ hr. finishing running 8 5/8" casing, 3 3/4 hr. cementing 4 times with 1" pipe, 14 $\frac{1}{2}$ hr. waiting on cement and servicing rig, 1 $\frac{1}{2}$ hrs. temperature survey (top of cement at 410' & inside at 1258'), 3 $\frac{1}{2}$ hrs. cut off & weld on head, 3/4 hr. nippling up BOP, 16 collars in hole, Est. Daily Cost: \$865.04, Est. Cum. Cost: \$39,954.58
- 9-2-83: Drilling at 1920', made 600' in last 24 hrs., averaging 30' per hr., Bit #5 Smith F57 has made 600' in 18 $\frac{1}{2}$ hrs., Survey at 1820' was 3/4 $^{\circ}$, M.W. 8.5, Vis. 28, PH 9.5, P.P. 1200, Strokes 94, RPM 64, Wt. on Bit 45,000, 2 $\frac{1}{2}$ hrs. nippling up BOP, 1 hr. trip in hole, 2 hrs. drilling cement, 18 $\frac{1}{2}$ hrs. drilling, $\frac{1}{4}$ hr. survey, 18 drill collars in hole, Est. Daily Cost: \$10,499.26, Est. Cum. Cost: \$50,453.84
- 9-3-83: Drilling at 2612', made 692' in last 24 hrs., averaging 30-35' per hr., Bit #5 Smith F57 has made 1292' in 41 $\frac{1}{2}$ hrs., Survey at 2320' was 3/4 $^{\circ}$, M.W. 8.4, Vis. 28, PH 9.5, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 23 $\frac{1}{2}$ hrs. drilling, $\frac{1}{2}$ hr. servicing rig, $\frac{1}{4}$ hr. survey, mixed 3 sacks paper & 5 sacks lime, Est. Daily Cost: \$11,529.56, Est. Cum. Cost: \$61,983.40
- 9-4-83: Drilling at 3255', made 643' in last 24 hrs., averaging 25' per hr., Bit #5 has made 1935' in 64 $\frac{1}{2}$ hrs., Survey at 2794 was 1 $^{\circ}$, M.W. 8.4, Vis. 28, PH 10, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 23 $\frac{1}{2}$ hrs. drilling, $\frac{1}{2}$ hr. survey, mixed 2 sacks paper, Est. Daily Cost: \$10,207.71, Est. Cum. Cost: \$72,191.11
- 9-5-83: Making trip at 3753', made 498' in last 24 hrs., drilling at 14' per hr., Bit #5 has made 2433' in 87 $\frac{1}{2}$ hrs., Survey at 3290' was 3/4 $^{\circ}$, M.W. 8.4, Vis. 28, PH 9, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 22 $\frac{1}{2}$ hrs. drilling, $\frac{1}{4}$ hr. servicing rig, $\frac{1}{2}$ hr. survey, 1 hr. trip, mixed 5 sacks lime & 2 sacks paper, Est. Daily Cost: \$9,142.46, Est. Cum. Cost: \$81,333.57
- 9-6-83: Drilling at 4162', made 409' in last 24 hrs., drilling at 20' per hr., Bit #6 7 7/8" Reed HPMH has made 409' in 20 hrs., Survey at 3753' was 1 $^{\circ}$, M.W. 8.4, Vis. 28, PH 9.5, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 3 3/4 hr. trip, strapped drill pipe and cut drilling line, 20 hrs. drilling, $\frac{1}{4}$ hr. survey, Est. Daily Cost: \$6,988.11, Est. Cum. Cost: \$88,321.68
- 9-7-83: Drilling at 4560', made 398' in last 24 hrs., drilling at 16' per hr., Bit #6 has made 807' in 43 $\frac{1}{2}$ hrs., Survey at 4250' was 1/2 $^{\circ}$, M.W. 8.4, Vis. 28, PH 10, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 23 $\frac{1}{2}$ hrs. drilling, $\frac{1}{2}$ hr. servicing rig & survey, mixed 2 sacks paper and 5 sacks lime, Est. Daily Cost: \$6,771.46, Est. Cum. Cost: \$95,093.14
- 9-8-83: Drilling at 5024', made 464' in last 24 hrs., drilling at 18' per hr., Bit #6 has made 1271' in 67 hrs., Survey at 4744' was 3/4 $^{\circ}$, M.W. 8.4, Vis. 28, PH 9.5, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 23 $\frac{1}{2}$ hrs. drilling, $\frac{1}{2}$ hr. service rig & survey, mixed 3 sacks paper and 8 sacks lime, Est. Daily Cost: \$21,212.94, Est. Cum. Cost: \$116,306.08
- 9-9-83: Making trip at 5455', made 431' in last 24 hrs., drilling at 12-14' per hr., Bit #6 Reed HPMH has made 1702' in 88 $\frac{1}{2}$ hrs., Survey at 5270' was 3/4 $^{\circ}$, M.W. 8.4, Vis. 28, PH 10, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, 21 $\frac{1}{2}$ hr. drilling, $\frac{1}{4}$ hr. servicing rig, 3/4 hr. survey, 1 3/4 hr. trip, Est. Daily Cost: \$7,122.91, Est. Cum. Cost: \$123,428.99

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- 9-10-83: Drilling at 5730' in 70% lime and 30% shale, made 275' in last 24 hrs., drilling at 25' per hr., Bit #7 Security M89F has made 275' in 14½ hrs., Survey at 5455 was 1¼°, M.W. 8.4, Vis. 28, PH 10, P.P. 1200, RPM 64, Wt. on Bit 45,000, 18 collars in hole, slight rainbow to pit at 5450', 14½ hrs. drilling, 5 hrs. trip & check drill collars, 4 hrs. Yellow Jacket test, ½ hr. nipling up rotating head, Est. Daily Cost: \$5,433.67, Est. Cum. Cost: \$128,862.66
- 9-11-83: Drilling at 6170' in 100% Dolomite, made 440' in last 24 hrs., drilling at 19' per hr., Bit #7 has made 715 in 37 hrs., Survey at 5916' was ¾°, M.W. 8.8, Vis. 28, PH 10, P.P. 1300, RPM 64, Wt. on Bit 45,000, 18 collars in hole, hit Dolomite at 5880' with slight show oil to pit, good cut & florescents from 5880-5890', no breaks, 120 units background gas, mixed 3 sacks paper & 5 sacks lime, 23 hrs. drilling, ¼ hr. servicing rig, ½ hr. survey, ¼ hr. installing rubbers on rotating head, Est. Daily Cost: \$8,101.76, Est. Cum. Cost: \$136,964.42
- 9-12-83: Drilling at 6635' in 40% lime & 60% shale to sandstone, made 465' in last 24 hrs., drilling at 15-18' per hr., Bit #7 has made 1180' in 58 ¾ hrs., Survey at 6415' was ¾°, M.W. 8.8, Vis. 28, PH 9.5, P.P. 1300, RPM 64, Wt. on Bit 45,000, Chlorides 61,000, 18 collars in hole, drilling breaks from 6250' to 6260', 8-10 units background gas, no shows, from 6362 to 6376' in Dolomite, 10 units background gas, no shows, mixed 2 sacks paper & 5 sacks costic, 21 ¾ hr. drilling, ¼ hr. service rig, ½ hr. survey, 1½ hrs. circulating samples, Est. Daily Cost: \$8,075.01, Est. Cum. Cost: \$145,039.43
- 9-13-83: Making trip at 7044', in 90% shale & 10% limestone, made 409' in last 24 hrs., drilling at 10-11' per hr., Bit #7 has made 1589' in 79½ hrs., Survey at 7044' was 1°, M.W. 9, Vis. 29, PH 9.5, P.P. 1300, RPM 64, Wt. on Bit 45,000, Chlorides 61,000, 18 collars in hole, drilling break from 6949' to 6960', drilling at 2½ min. per ft. with 15-25 units gas before break, 1 min. per ft. with 150-175 units gas during break and 2½ min. per ft. with 100-175 units gas after break, circulated out & received big gas kick, shut-in 45 min. gas blowing over shaker, well flowed, no increase in pressure, 80% lime didn't cut or florescent, abundant distillate in sample box, pretty light like volatile gas, 20½ hrs. drilling, ¼ hr. servicing rig, 1½ hrs. circulating samples, 2 hrs. trip, Est. Daily Cost: \$7,258.11, Est. Cum. Cost: \$152,297.54
- 9-14-83: Drilling at 7334' in 100% shale with trace of lime, made 290' in last 24 hrs., drilling at 20' per hr., Bit #8 Smith F57 has made 290' in 16 ¾ hrs., M.W. 9, Vis. 29, PH 10.5, P.P. 1300, Strokes 90, RPM 64, Wt. on Bit 45,000, Chlorides 67,000, 18 collars in hole, drilling break from 7218' to 7226', drilling at 3-3½ min. per ft. with 66-110 units gas before break, 1-½ min. per ft. with 325 units gas during break and 4-5 min. per ft. with 60-70 units gas after break, shut-in well for approx. 1 hr., gas came up in 23 min., had good crystalline & frac porosity, very good bright blue flcrescents & trace of cut, distillate all over pits, mixed 5 sacks costic, 16 ¾ hrs., drilling, ¼ hr. servicing rig, 4½ hrs. trip & cutting drilling lire, 2½ hrs. circulating samples, Est. Daily Cost: \$5,386.76, Est. Cum. Cost: \$157,684.30

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9-15-83: Circulating at 7728', made 394' in last 24 hrs., Survey at 7532' was 3/4^o, Bit #8 has made 684' in 38 1/2 hrs., M.W. 9.1, Vis. 29, PH 10, P.P. 1300, RPM 64, Chlorides 67,000, drilling break from 7702' to 7728', courtesy ^{Upper} ~~crystalline dolomite~~, good cut from samples, should be ready to run Drillstem Test at 1:00 or 2:00 P.M., 18 collars in hole, mixed 4 sacks costic, 21 1/2 hrs. drilling, 1/4 hr. servicing rig, 2 1/2 hrs. circulating samples, Est. Daily Cost: \$6,666.36, Est. Cum. Cost: \$164,350.66

9-16-83: At 7728', loading test tool out of hole, -0- footage, Survey at 7728' was 1^o, M.W. 9.2, Vis. 29, PH 10, 18 collars in hole, mixed 20 sacks gel, 3 3/4 hr. circulating, 9 1/2 hr. trips, 6 3/4 hrs. on bottom with test tool, 3 hr. pick up & lay down tools, 1 hr. pick up & reverse out, Est. Daily Cost: \$144.76, Est. Cum. Cost: \$164,495.42

Results of Drillstem Test of 7702' to 7728'

Opened 2 hrs., reversed out estimated 300' of oil & sulphur water & 870' of gas-cut sulphur water, Sample Chamber Recovery: 4.3 cubic feet gas, 100 cc oil & 1800 cc gas-cut sulphur water, 60 min. ISIP 2887, flowing pressure 524-1113, 3 hr. FSIP 2887, Hydrostatic pressure 3665-3625, porous courtesy crystalline dolomite, Canyon Dolomite

9-17-83: Drilling at 8160', made 432' in last 24 hrs., drilling at 15' per hr., M.W. 9, Vis. 29, Ph 9.5, Wt. on Bit 45,000, P.P. 1300, RPM 64, Bit #9 Smith F57 has made 432' in 20 3/4 hrs., 18 collars in hole, mixed 6 sacks costic, 40 units background gas, 20 1/2 hrs. drilling, 1/2 hr. servicing rig, 3 hrs. trip in hole, Est. Daily Cost: \$11,600.71, Est. Cum. Cost: \$176,096.13

9-18-83: Drilling at 8560', made 400' in last 24 hrs., drilling at 18' per hr., Survey at 8209' was 1^o, Bit #9 has made 832' in 43 1/2 hrs., M.W. 8.9, Vis. 28, PH 10, P.P. 1300, RPM 64, Wt. on Bit 45,000, 18 collars in hole, mixed 2 sacks costic, 22 3/4 hrs. drilling, 1/4 hr. servicing rig, 1/2 hr. repair on mud line with welder, 1/2 hr. survey, Est. Daily Cost: \$6,937.26, Est. Cum. Cost: \$183,033.39

9-19-83: Drilling at 8880', made 320' in last 24 hrs., drilling at 12' per hr., Survey at 8701' was 1 1/4^o, Bit #9 has made 1152' in 64 1/2 hrs., M.W. 9, Vis. 39, PH 10.5, P.P. 1300, RPM 64, Wt. on Bit 45,000, Chlorides 51,000, W.L. 7.6, Cake 1/32, 18 collars in hole, mixed 373 sacks gel, 13 sacks soda ash, 14 sacks dispak, 5 sacks preservatives & 10 sacks paper, 80 units background gas, 20 3/4 hrs. drilling, 1/4 hr. servicing rig, 3 hrs. set mud cleaner (pulled & reran 4 stands), Est. Daily Cost: \$11,543.76, Est. Cum. Cost: \$194,577.15

9-20-83: Making trip for new bit at 9111', made 231' in last 24 hrs., drilling at 9' per hr., Bit #9 has made 1383' in 84 1/2 hrs., M.W. 9.1, Vis. 36, PH 10, W.L. 8, P.P. 1300, RPM 64, Wt. on Bit 45,000, Chlorides 64,000, filter cake 1/32, 18 collars in hole, 60 units background gas, mixed 76 sacks gel, 7 sacks dispak, 4 sacks paper & 3 sacks soda ash, 20 1/2 hrs. drilling, 1/4 hr. servicing rig, 2 1/2 hrs. trip for hole in drill pipe 18 stands down, 3/4 hr. trip for bit, Est. Daily Cost: \$5,050.91, Est. Cum. Cost: \$199,628.06

9-21-83: Drilling at 9180', made 69' in last 24 hrs., drilling at 10' per hrs., Big #10 Smith F57 rerun of Bit #8 has made 69' in 7 hrs., Survey at 9111' was 1 1/2^o, M.W. 9.1, Vis. 36, W.L. 8, PH 10.5, P.P. 1300, RPM 64, Wt. on Bit 45,000, Chlorides 61,000, Filter Cake 1/32, mixed 25 sacks gel, 1 sack dispak & 1 sack soda ash, 7 hrs. drilling, 9 hrs. repairs on transmission shaft in draw works, 8 hrs. trip & cut drilling line, Est. Daily Cost: \$1,579.49, Est. Cum. Cost: \$201,207.55

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- 9-22-83: Drilling at 9420', made 240' in last 24 hrs., drilling at 10' per hr., Bit #10 has made 309' in 30 3/4 hrs., M.W. 9.1, Vis. 36, PH 10, W.L. 7.6, P.P. 1300, RPM 64, Strokes 94, Wt. on Bit 45,000, Chlorides 67,000, Filter Cake 1/32, 18 drill collars in hole, mixed 60 sacks gel, 9 sacks dispak, 4 sacks soda ash & 2 sacks costic, 23 3/4 hrs. drilling, 1/4 hr. servicing rig, Est. Daily Cost: \$5,798.88, Est. Cum. Cost: \$207,006.43
- Drilling Breaks: 9190' to 9204' drilling at 4 min. per ft., Zones 2 & 3
9228' to 9237' drilling from 2-5 min. per ft.
9250' to 9270' drilling from 1-2 min. per ft., Zone 6
9272' to 9278' drilling from 2-3 min. per ft., Zones 7 & 8
9290' to 9300' drilling from 1-3 min. per ft., Zones 7 & 8
9312' to 9340' drilling from 3-4 min. per ft., Zones 10 & 11
9355' to 9368' drilling from 2-3 min. per ft., Zone 12
- 9-23-83: T.D. 9555' circulating for logs, made 135' in last 24 hrs., drilling at 7' per hr., drilling in 100% shale with trace of lime until 9504' then were in 70% lime & 30% shale, background gas 15-30 units, connection gas 45 units, reached T.D. at 3:10 A.M. Texas time, M.W. 9.1, Vis. 39, PH 10.5, W.L. 6, P.P. 1300, Wt. on Bit 45,000, RPM 64, Chlorides 65,000, Bit #10 made 444' in 50 3/4 hrs., 18 collars in hole, mixed 18 sacks gel & 4 sacks dispak, 20 hrs. drilling, 1/4 hr. servicing rig, 3 3/4 hrs. circulating for logs, Est. Daily Cost: \$4,328.51, Est. Cum. Cost: \$211,334.94
- 9-24-83: T.D. 9555' logging, Survey at 9555' was 3/4^o, M.W. 9.2, Vis. 39, W.L. 6, PH 10.5, Filter Cake 1/32, Chlorides 65,000, logs went to 9552', 4 hrs. trip, 20 hrs. logging, Est. Daily Cost: \$144.76, Est. Cum. Cost: \$211,479.70
- 9-25-83: T.D. 9555' logging, 5 hrs. logging, 3 hrs. trip, 3 1/2 hrs. circulating, 5 3/4 hrs. laying down drill pipe, 7 hrs. rigging up and running 238 jts. casing, Est. Daily Cost: \$4,237.26, Est. Cum. Cost: \$215,716.96
- Rigged up & ran 1 Halliburton float shoe on 1 jt. of 4 1/2" OD 8rd. 11.60# N-80 casing, 1 Halliburton float collar & 17 jts. ditto casing, total 18 jts. 745' & 189 jts. of 4 1/2" 8rd 11.60# J-55 casing 7587' & 30 jts. 4 1/2" 8rd. 11.60# N-80 casing to surface 1223', total of 237 jts. 9551' set at 9552' KB, left out 1 jt. N-80 good, 1 jt. with bad order pin & 1 jt. J-55 bad order box, rigged up Halliburton, displaced mud out of hole with 3% KCL water with corrosion inhibitor, pumped 500 gal. mud flush ahead of 675 sacks 50/50 poz mix H cement with 5/10 of 1% CFR-2, 1/4# flocele, 4/10 of 1% Hallad 22 & 2% gel, followed with 300 sacks Class H cement containing 4/10 of 1% CFR-2, 5/10 of 1% Hallad 22 & 3% KCL, had good circulation through out cement job & displaced balance of mud in hole, ran temperature survey which indicated top of cement at 6300' from surface outside of 4 1/2" casing.
- 9-26-83: T.D. 9555', 4 1/2 hrs. displaced hole with KCL water & cementing, 1 1/2 hrs. pick up BOP, set slip & cut off casing, 3 hrs. nipple down & clean pits, 1 1/2 hrs. dead time for rigging down, released rig at 3:00 P.M. New Mexico time, Est. Daily Cost: \$11,294.76, Est. Cum. Cost: \$227,011.72
- 9-27-83
thru
9-30-83 Waiting on completion
- 10-1-83
thru
10-10-83 Waiting on completion, no further report will be forwarded until completion is commenced.

TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

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SOUTH BOYD #1

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- 10-11-83
thru 11-6-83 Waiting on completion
- 11-7-83: Moved in & rigged up, ran Well Service pulling unit, installed tubing head, installed pressure gauge on 4½"x8 5/8" casing annulus, shut down overnight
- 11-8-83: -0- pressure on casing annulus, rigged up GeoVann, ran PDC correlation log from plugged back T.D. to 5600' from surface, shut down overnight.
- 11-9-83. Tied into collar log, perforated with 4 holes per foot at 9327', 9290', 9287', 9282', 9272' and 9262', 9250', 9251', 9252, 9253' and 9254', 9227', 9228', 9229', 9230', 9196', 9209' and 9210'. Rigged down Geo Van, tripped in hole 2 joints tail pipe with R nipple, Watson packer with on/off tool, with 1.81" profile nipple and 2 3/8" N-80 tubing. Incomplete. Shut down overnight.
- Morrow
- 11/10/83 Finished tripping in hole, rigged up Halliburton, set packer below perforated intervals. Pressure tubing-casing annulus with 2000 lbs. pressure tested packer and tubing to 8,000 lbs and held, released packer, spotted acid over perforated interval, re-set packer at 9,040' with bottom of tail pipe at 9110', broke down perfs with 3100 lb. pressure, displaced spot acid, rigged up and swabbed load water and acid back, rigged up Halliburton with nitrogen, acidized Morrow zones with 4,000 gals. 7½% Morrow BC acid containing 1,000 SCF of nitrogen per barrel, injected 144 RCN ball sealers throughout acid. Had fair ball action, pressure increased on casing annulus, possible small tubing leak or packer. Average treating pressure 5984 lbs, maximum pressure 6200 lbs. Average injection rate 5 barrels/minute on acid and nitrogen. ISIP 4200 lbs, 10 min. SIP 3600 lbs. Rigged down Halliburton, released pressure to pit. Well flowing gas after 4 hours by heads. Flowed well throughout night with estimated 1/2 barrels water per hour recover with good steady gas flow. Casing pressure steady at 250 lbs. 0 lbs. tubing pressure on 27/64 choke in at 7 a.m. 11/11/83.
- 11-11-83: Well flowing, flare 8-12', recovered 1 to 1½ bbls. water per hr. on 32/64" choke, -0-# tubing pressure, -0-# casing pressure, rigged up Bennett Caffey Wireline, set blanking plug in 1.81" profile nipple, rigged up Nowsco, pressured tubing to 5200# with no increase on tubing casing annulus, pressured tubing casing annulus with 2500# and no change in pressures, retrieved blanking plug, pumped nitrogen thru tubing and pressured to 5250#, released casing pressure to 500#, showed 50# increase on tubing casing annulus in 20 min., released wireline and 4-2 units at 4:00 A.M. Saturday 11-12-83, left 4600# pressure on tubing.
- 11-12-83: Tubing casing annulus pressure came up to 1600# and tubing pressure 3300# at 12:00 Noon, moved in Recon & filtered frac water, casing pressure at 5:00 P.M. was 2000#, tubing pressure 2960#, blew down casing pressure, opened well up to pit, had gas flare at 6:00 P.M. & fluid at 7:00 P.M., flowed well thru night until 7:00 A.M., closed in well for build-up.
- 11-13-83: Rigged up Bennet Caffey and ran 4 point test, closed in well.

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11-14-83: Closed in Tubing Pressure at 7:00 A.M. was 2200#, casing pressure 1400#, opened tubing to pit on wide open choke & flowed down, trip in hole with swab, fluid level 3900' from surface, pulled fluid level down to 7000' from surface on 2nd run, rigged up Halliburton, loaded tubing casing annulus with 43 bbls. 3% KCL fresh water with clay stay, loaded tubing with 26 bbls. same fluid, released packer, well flowing up tubing, loaded casing back up & well still flowing, waited on 10# brine water with additives, balanced out 10# brine water with 3% KCL water with clay stay and additives on tubing and casing, well dead, pulled out of hole with tubing and packer, took packer to shop, did not find any problems that would warrant leak we had, shut down overnight.

Results of 4 point test:

Start of 4 point test: 1697 Tubing Pressure

1 hr. on 4/64" choke	92,000 MCFD	1587 Tubing Pressure
1 hr. on 5/64" choke	130,000 MCFD	1565 Tubing Pressure
1 hr. on 6.5/64" choke	188,000 MCFD	1432 Tubing Pressure
1 hr. on 8/64" choke	272,000 MCFD	1135 Tubing Pressure
AOF	382,000 MCFD	

NOTE* The AOF would have been more if the well would have been shut-in for a longer period of time before the test was run to let the pressure stabilize and there was fluid going thru the flow line to the pit which probably fell to the bottom and acted as a choking agent.

11-15-83: Well still dead, rigged up Hydrostatic tester, tested in hole with new packer to 7000# above slips, found 1 collar leak, rigged down testers, set packer at 9012', tail pipe at 9082', shut down overnight.

* 11-16-83: Rigged up Halliburton and CO² units, fraced Morrow zone from 9196' to 9327' with 20,000 - 200 gal. gel acid carrying 170,000# 20-40 sand in 2 stages using 30% CO², infected; 35 ball sealers mid-way thru frac, had break on frac after ball sealers on perfs, maximum pressure 7860#, average pressure 7500#, average injection rate 10 bbls. per min, ISIP 3200#, 15 min. SIP 2820#, rigged down Halliburton, left well closed-in 4 hrs., opened well to pit, had gas flare after 5 hrs, continued flowing through out night on wide open choke, -0-# tubing pressure with 8-10' flare, still recovering load fluid in fine spray, casing pressure increased thru night to 1600# at 7:00 A.M. 11-17-83.

11-17-83: Continued flowing well on wide open choke until 5:00 P.M., still recovering estimated 20 bbls. water per day, bled casing pressure off slowly during day to -0-#, closed in well for build-up.

11-18-83: 2300# tubing pressure, -0-# casing pressure, packer holding, rigged down pulling unit to move to Parino #1, opened well up to pit, still have some CO² in well bore, flowed well down to wide open choke, -0-# tubing pressure, recovering CO² and acid water with good steady flare, closed in well for build-up at 12:30 P.M.

11-19-83: Closed in tubing pressure 2300#, -0-# casing pressure, flowed well on wide open choke for 5 hrs., -0-# tubing pressure with good steady flare, still recovering some CO² and load water, closed-in at 12:30 P.M. for build up until Monday.

11-20-83: Shut Down for Sunday

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TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

- 11-21-83: 44 hr. closed in tubing pressure 2500#, 175# casing pressure, after recovering 3½ bbls. load water opened well to pit on wide open choke, -0-# tubing pressure, flowed well until 4:30 P.M., after 8 hrs. recovering small amount of load water with good steady flare, closed-in overnight.
- 11-22-83: 15 hr. closed in tubing pressure 2500#, 1075# casing pressure, opened well to pit, flowed on 10/64" choke, tubing pressure 200# until 11:00 A.M., opened choke to 1/2 choke, still recovering CO² and load water with good steady flare, 11:30 A.M. -0-# flowing tubing pressure, 1:30 P.M. -0-# flowing tubing pressure, still recovering load fluid with steady flare, opened to 25/64" & flowed until 5:30 P.M. with fine spray of load water and steady flare.
- 11-23-83: 2500# closed in tubing pressure, flowed well down with good steady flare on wide open choke, -0-# flowing tubing pressure, rigged up swab, recovered very small amount of fluid, rigged down swab, closed-in for bottom hole pressure and 4 point.
- 11-24-83: Closed in for build-up and 4 point
- 11-25-83: Closed in for build-up and 4 point
- 11-26-83: Rigged up Bennett Cathey, ran bottom hole pressure bombs to run a 4 point, closed in well for build-up.
- 11-27-83: Closed-in for build-up
- 11-28-83: Closed in for build-up
- 11-29-83: Closed in for build-up, pulled bombs, closed in for evaluation
- 11-30-83: Rigged up Bennett Cathey, set check valve in "R" nipple at 9044' G.L., set select lock plug in profile nipple at 9006' G.L., blew tubing down in 1 hr. to -0-# tubing pressure and would not bleed off completely, closed-in and pressure increased to 600# in 10 min., plug not holding, closed-in overnight.
- 12-1-83: 2600# tubing pressure, 300# casing pressure, went in hole with wire line tool, found plug up hole 3', retrieved plug, reran redressed plug, set in profile nipple as before, bled down tubing in 25 min. & plug holding, rigged down wire line, rigged up Halliburton, loaded tubing with 3% KCL water with additives to equalize tubing casing, waiting on completion unit.

RESULTS OF 4 POINT TEST

Shut-In Tubing Pressure 2700#

Shut-In Bottom Hole Pressure 3517#

1 hr. on 5/64" choke	354 MCFD	2495 FTP	3211 FBHP
1 hr. on 5.5/64" choke	500 MCFD	2250 FTP	2850 FBHP
1 hr. on 7/64" choke	532 MCFD	1980 FTP	2551 FBHP
1 hr. on 8/64" choke	595 MCFD	1670 FTP	2207 FBHP
AOF	766 MCFD		

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TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

12-2-83: Waiting on completion unit

12-3-83: -0-# tubing pressure, -0-# casing pressure, moved in & rigged up pulling unit, released on/off tool from packer, pulled out of hole incomplete

12-4-83: Shut down for Sunday

12-5-83: Finished pulling out of hole, trip in hole with Halliburton retrievable bridge plug, set at 8057', rigged up Halliburton, spotted 1 sack of sand on bridge plug, pulled out of hole, rigged up Geo Vann, tagged into PDC log, perforated at 7958, 59, 63, 64 & 65, 7868 & 69 with 1 hole per ft., rigged down Geo Vann, tripped in hole with Halliburton RTTS packer, incomplete

2 3/4 Hg
U80
*
Lower
Cy

12-6-83: Finished tripping in hole, rigged up Halliburton, spotted break down acid over perfs at 7958-65', set packer at 7900', broke down perfs at 1800#, displaced acid at 3800#, reset packer at 7813', opened by-pass on packer, spotted acid down tubing injecting 2 ball sealers each 5 bbls., closed by-pass when acid within 2 bbls. of packer, acidized with total of 2000 gal. 15% NEFE using 750 SCF N² per bbl. had good ball action, maximum pressure 6000#, average pressure 5770#, average injection rate of 5 bbls. per min. on fluid and N², ISIP 3400#, 10 min. SIP 2200#, rigged down Halliburton, flowed well to pit with good return, rigged up swab, fluid level 1800' from surface, swabbed estimated 35 bbls. water with fluid level staying at 2000' from surface, closed in overnight.

12-7-83: Tubing pressure 250#, fluid level 1200' from surface, swabbed estimated 300 bbls. water with fluid level staying at 1200' from surface, rigged down swab, rigged up Halliburton, released packer, pulled up to 7630', set packer, pumped 125 sacks cement to squeeze off perfs at 7868-7965', locked up perfs at 5000#, reversed out 2 bbls. cement, pulled up 2 stands tubing, reset packer and repressured tubing, closed in overnight.

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12-8-83: Pressure still on tubing, released pressure and packer, pulled out of hole, trip in hole with 3 3/4" bit on 2 3/8" tubing, rigged up reverse unit, drilled out cement from 7611' to 7970', circulated hole clean, pressure test squeeze perfs to 3000# and held, closed in overnight.

12-9-83: Displaced hole with 3% KCL water, pulled out of hole, rigged up Geo Vann, perforated at 7795, 96, 97, 98, 99, 7800, 01, 02, 04, 05, 08, 09, 10, 11, 12 & 13 with 1 hole per ft., rigged down Geo Vann, trip in hole with retrievable bridge plug and RTTS packer, set retrievable bridge plug at 8050' and pressure tested, rigged up Halliburton, spotted 1 sack of sand on bridge plug, spotted break down acid, set packer at 7700', broke down perfs at 5000#, displaced acid, started 3500 gal. 15% NEFE acid down tubing with by-pass on packer open injecting 2 ball sealers each 5 bbls., closed by-pass on packer when acid within 2 bbls. of packer injecting 750 SCF N² per bbl., balled out with 20 ball sealers on perfs, dropped off balls, resumed acid & flush, maximum pressure 6890#, average pressure 3000#, average injection rate of 5 bbls. per min on acid & N², ISIP 1800#, 5 min. SIP 1040#, rigged down Halliburton, opened well to pit, had good flare & distillate show in 1 1/2 hrs. rigged up test unit & well loaded up with fluid, closed in at 1:30 A.M. 12-10-83.

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12-10-83: 7 hr. closed in tubing pressure 200#, opened well to test tank, would not flow, waiting on swabbing unit.

12-11-83: Closed in, waiting on swabbing unit

CHAMA PETROLEUM COMPANY

SOUTH BOYD #1

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TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

12-12-83: -0-# tubing pressure, -0-# casing pressure, believe that valve and/or choke leaked off any gas build-up, fluid level 1100' from surface, kicked off well in 4 swab runs, very weak flow on wide open choke, well continued to flow, left open to tank overnight, swabbed and flowed total of 26 bbls. oil and 279 bbls. water in 24 hrs.

12-13-83: -0-# flowing tubing pressure, -0-# casing pressure, well barely flowing, swabbed and flowed total of 147 bbls., 21 bbls. oil and 126 bbls. water while on wide open choke, rigged up Halliburton, released packer, washed sand and ball sealers off of retrievable bridge plug, still have some ball sealers or junk on neck of retrievable bridge plug, losing considerable water to perms with very poor circulation by packer, pulled out of hole with 29 stands tubing, closed-in overnight.

12-14-83: Finished pulling out of hole with RTTS packer, tripped in hole with retrieving tool, pumped down tubing, latched on to bridge plug and pulled out of hole, recovered some ball sealers and perforating material, tripped back in hole with retrievable bridge plug, rigged up Geo Vann to get on depth, set bridge plug at 7791', attempted to pressure test and would not hold, closed-in overnight.

12-15-83: Reset retrievable bridge plug up hole 2' and would not pressure test, reset plug 1 joint higher and would not test, pulled out of hole, tripped back in hole with redressed bridge plug, set at 7790', pressure tested and held, spotted 1/2 sack sand and 250 gal. 15% NEHCL over proposed perms, pulled out of hole, rigged up Geo Vann, tagged top of sand & O.K., perforated from 7714 to 7775', shot at 7775' did not fire, reshot zone, rigged down Geo Vann, tripped in hole with RTTS packer, set at 7658', rigged up Halliburton and Nowsco, broke down perms at 1900#, displaced spot acid, ISIP "Vacuum", acidized perms from 7714-7775' with 3500 gal. 15% NEFE, using 750 SCF of N₂ per bbl. injecting 2 ball sealers each 5 bbls., total 30 ball sealers, had fair ball action & breaks, maximum pressure 3600#, average pressure 3200# at 5 bbls. per min. on acid & N₂, ISIP 2200#, 5 min. SIP 1200#, rigged down Halliburton, opened well to nit, flowed distillate and gas in 2 hrs., turned well into test tank at 11:00 P.M.

12-16-83: Well dead, did not flow overnight, fluid level 1100' from surface, swabbed & flowed estimated 260 bbls. fluid in 8 hrs., recovering 2-3% oil & 97-98% water, closed in overnight.

12-17-83: 290# closed-in tubing pressure, fluid level 800' from surface, swabbed & flowed estimated 297 bbls. fluid in 9 hrs. with fluid level staying at 800-1100' from surface, color cut indicated 2% oil & 98% water, swabbing 32-40 bbls. per hr., closed-in overnight.

12-18-83: Closed-In

12-19-83: 550# tubing pressure, master valve & flow lines frozen up, bleeder valve from test tank froze up, temperature 18°, wind 15 miles per hrs., left well closed-in

W. S. Boyd = 12-12-83
12-13-83

Upper
G-G

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CHAMA PETROLEUM COMPANY

SOUTH BOYD #1

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TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

- 12-20-83: Rigged up hot oiler, steamed well head, tubing & lines to thaw out ice, released tubing pressure, fluid level 800' from surface, ~~swabbed estimated 10 bbls. oil and 55 bbls. water in 3 hrs.~~, this is 2 days closed-in time, released packer, reset at 7766' to ~~swab perfs from 7771-76'~~, swabbed estimated 40 bbls. water at 1% oil cut with small amount of gas, casing stayed static, ~~reset packer at 7751'~~ to swab perfs from 7756-76', swabbed estimated 40 bbls. water, 100% with very little gas, casing stayed static, closed-in overnight.
- 12-21-83 160# closed-in tubing pressure, -0-# casing pressure, fluid level 1300' from surface, ~~swabbed estimated 60 bbls. water with 1% oil cut from perfs. from 7756-76'~~, casing stayed static, fluid level 800' from surface, ~~reset packer at 7726'~~, ~~swabbed estimated 78 bbls. water with 1 1/2% oil cut from perfs. 7735-76'~~, fluid level 800-1100' from surface, casing static, released packer, rigged up Halliburton, washed ball sealers and sand off of retrievable bridge plug at 7790', ~~reset bridge plug at 7750'~~, set RTTS packer at 7726', closed-in overnight.
- 12-22-83: 100# tubing pressure, -0-# casing pressure, fluid level 1000' from surface, ~~swabbed estimated 61 bbls. water at 1 1/2% oil cut. lots of gas in swab run.~~ very little gas behind run, swabbed 4 hrs., weather very severe, 11° temperature with wind 7-10 miles per hr. & light snow, shut down overnight.
- 12-23-83: 150# tubing pressure, fluid level 1000' from surface, ~~swabbed estimated 78 bbls. fluid at 1 1/2% oil cut from perf 7735-46'~~, ~~reset bridge plug at 7726'~~ and packer at 7680', ~~swabbed estimated 163 bbls. fluid from perfs 7714-16'~~ fluid level at 800-1000' from surface at 1 1/2% oil cut. casing static, closed-in well for Holiday.
- 12-24-83: Closed-In for Holiday
- 12-25-83: Closed-In for Holiday
- 12-26-83 Closed-In due to bad weather.
- 12-27-83: 500# tubing pressure, -0-# casing pressure, fluid level 800' from surface, ~~swabbed estimated 57 bbls. fluid from perfs 7714-16' at 1 1/2% oil cut~~ released RTTS packer, released bridge plug, ~~reset bridge plug at 7850'~~ and RTTS packer at 7785', ~~straddled perfs 7795-7813'~~, swabbed 156 bbls. water with small amount of gas, fluid staying at 1000' from surface, closed-in overnight.
- 12-28-83: -0-# tubing pressure, fluid level 1000' from surface, swabbed 45 bbls. water, -0- bbls. oil, closed-in well due to severe weather
- 12-29-83: -0-# tubing pressure, pulling unit battery froze & burst, waited on battery, released packer, retrieved bridge plug, pulled out of hole, trip back in hole with redressed bridge plug and packer, ~~set retrievable bridge plug at 7851'~~ and RTTS at 7792', ~~straddled perfs from 7795-7813'~~ closed-in overnight.
- 12-30-83: -0-# tubing pressure, 200# casing pressure, fluid level 1000' from surface, swabbed 251 bbls. water with gas in swab fluid, no oil show with fluid staying at 1000' from surface, took fluid sample to Halliburton for analysis

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TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

- 12-31-83: 100# tubing pressure, 600# casing pressure, ~~bled casing down to 150#~~ & flowed oil and water, closed-in casing, fluid level 1000' from surface, swabbed 241 bbls. water with fluid level staying at 1000' from surface, had trace of oil on last 2 runs, closed-in well, Halliburton water sample indicated 9000 chlorides, formation water.
- 1-1-84: Closed-In
- 1-2-84: -0-# tubing pressure, 600# casing pressure, bled casing down, fluid level 1000' from surface, ~~swabbed 241 bbls. of water, trace of oil on last 2 runs, some gas in swab runs~~
- 1-3-84: -0-# tubing pressure, ~~880# casing pressure, blew casing down until started flowing oil & water, closed-in casing, swabbed 206 bbls. water with fluid level 1000' from surface,~~ rigged up Geo Vann, tied into GammaRay log, found retrievable bridge plug at 7851' and packer at 7797', packer element would have been above perfs at 7795' ~~reset packer at 7784', swabbed 45 bbls. water, casing pressure built back up to 120#~~
- 1-4-84: Swabbed 110 bbls. water, no oil show, released packer, retrieved bridge plug and reset at 7980', set RTTS packer at 7970', pressure tested bridge plug & packer to 2000# & O.K., reset RTTS packer at 7850', pressure tested squeeze perfs to 2000# & O.K., released packer, retrieved bridge plug, reset bridge plug at 7785', pressure tested plug & would not hold, lowered bridge plug to 7782', reset RTTS packer & everything held, reset RTTS packer at 7760', pressured tubing casing annulus with 500# & held, swabbed 45 bbls. load water with fluid level 1000' from surface & gas increasing, shut down overnight
- 1-5-84: 300# tubing pressure, -0-# casing pressure, ~~swabbed 242 bbls. fluid with some gas in swab runs, fluid level stayed at 6-700' from surface, sample running 5-6% oil, unable to get color cut in tank, well gassing behind runs, closed-in overnight~~
- 1-6-84: ~~400# tubing pressure, blew well down, fluid level 1000' from surface, swabbed & flowed 245 bbls. fluid at 5-6% oil cut, well would flow for 10-35 min. after every other run, closed-in overnight.~~
- 1-7-84: 500# tubing pressure, flowed back 1/2 bbls. oil, fluid level 1000' from surface, ~~1st swab run from 3000' from surface recovered 80% oil, swabbed & flowed 115 bbls. fluid at average 5% oil cut with good gas blow in~~ swab runs, released packer, retrieved and reset bridge plug at 7980', reset packer at 7780', closed-in well, will run temperature & radioactive survey Monday to determine where excess water entry is coming from.
- 1-8-84: Closed-In
- 1-9-84: Rigged up Cardinal Survey, ran base temperature log, ran RA survey injecting RA material into zone 7795-7813' while pumping 1/2 bbl. per min. of produced water, survey indicated majority of fluid going down into old squeeze zone 7868-7965' and some RA indication of communication up to upper zone 7714-75', injected RA material in pipe between old squeeze perfs & no fluid movement, ran temperature survey which further confirmed channel out in formation primarily going down & minor communication up hole, rigged down Cardinal & Halliburton, closed-in overnight

2000' V&C TBG
= ± 7.3 bbl x .8
= 5.8 bbl



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TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

- 1-10-84: Released packer, retrieved bridge plug, pulled out of hole, trip back in hole with Halliburton cement retainer, set retainer at 7666', pressure test tubing & retainer, had small leak, dropped ball, pressure tested tubing & held at 3000#, circulated ball out of hole, mixed and pumped 100 sacks Class H cement containing 6/10 of 1% Hallad 9 & 100 sacks Class H neat cement, unable to obtain proper squeeze, cleared perfs with 10 bbls. fluid, closed-in overnight.
- 1-11-84: Pumped 200 sacks Class H neat cement, obtained 3000# squeeze with 43 sacks cement in casing & behind casing, reversed out tubing, rigged down Halliburton, pulled out of hole with tubing, trip in hole with bit and drill collars on 2 3/8" tubing, shut-down overnight.
- 1-13-84: Rigged up reverse unit, drilled out cement retainer & cement to 7785', pressure tested squeeze perfs from 7714-7775' to 1000# & held, continued drilling out cement to 7815', pressure tested to 1000# & held, reversed sand & ball sealers off of retrievable bridge plug at 8050', rigged down reverse unit, pulled out of hole incomplete, shut down overnight.
- 1-14-84: Finished pulling out of hole, laid down drill collars, trip back in hole with Halliburton retrieving tool on 2 3/8" tubing, ran 260 joints, laid down balance to be hauled into H&W, removed BOP, installed tree, closed in well, rigged down pulling unit, during day built battery pad, set 1-280 bbl. steel cone bottom welded tank bought from H&W Enterprises, installed valves, transferred oil from test tank to new stock tank, 7'4" or 102 bbls. oil in tank, filled in celler with crushed rock.
- 1-15-84: Finished breaking out flare line to be hauled into H&W along with other tubing, finished installing connections on stock tank, closed-in
- 1-16-84: Closed-In
- 1-17-83: Closed-In
- 1-18-84: Closed-In
- 1-19-84: Closed-In
- 1-20-84: Closed-in, built crushed rock pad for production equipment
- 1-21-84
thru Closed-In
- 1-24-84
- 1-25-84
thru Closed-In, waiting on Gas Contract
- 1-27-84
- 1-28-84
thru Closed-In
- 3-23-84
- 3-24-84: Moved in & rigged up pulling unit & shut-down
- 3-25-84: Closed-In
- 3-26-84: Removed wellhead, installed BOP, broke main shaft on pulling unit drive, replaced chain, rigged up Halliburton, washed sand off of retrievable bridge plug, retrieved bridge plug, pulling out of hole incomplete, shut-down due to high wind.
- 3-27-84: Finished pulling out of hole, shut-down due to high wind.

TIGHT HOLE - PLEASE DO NOT RELEASE ANY INFORMATION ON THIS WELL

- 3-28-84: Trip in hole with on/off tool, unable to latch onto packer, waited on & rigged up Halliburton, reversed residue off of packer with 3% KCL water containing clay stay, well flowed gas & water, plug appears to be leaking, circulated hole, latched onto packer, spaced out tubing, installed wellhead, rigged up Jerrel Services, attempted to retrieve blarking plug, retrieved plug which was broken, left bottom part of plug in hole, rigged down Jerrell Service, closed-in overnight.
- 3-29-84: 490# tubing pressure, fluid level 200' from surface, swabbed estimated 25 bbls. water & well started flowing, swabbed & flowed estimated 60 bbls. water, closed-in overnight.
- 3-30-84: 900# tubing pressure, opened well to pit, flowed estimated 25 bbls. load water, closed-in well, rigged down pulling unit.
- 3-31-84
thru
4-6-84 Closed in for evaluation
- 4-7-84: Casing Pressure 60#, tubing pressure 2750#, bled well down, flowed estimated 20 bbls. water, down to fine spray with 70# flowing tubing pressure on wide open choke, closed-in well, rigged down swab unit.
- 4-8-84: Closed-In
- 4-9-84: 650# tubing pressure, casing valve open and blowing fluid, closed-in casing pressure 300#, attempted to blow down casing, pressure built up to 500#, blew down tubing to -0-#, fluid level 200' from surface, swabbed & flowed estimated 25 bbls. water, casing pressure dropped to 250#, had estimated 20' flare from tubing, closed-in for further evaluation, rigged down swab unit
- 4-10-84
thru
4-15-84 Closed-In
- 4-16-84: 2680# tubing pressure, 2400# casing pressure, have apparent leak
- 4-17-84: 2675# tubing pressure, 2675# casing pressure, blew casing down, did not blow down completely, tubing pressure pulled down to 2400#, blew tubing down, pumped 10 bbls. water down tubing, removed wellhead, installed BOP, attempted to load tubing casing annulus, hole taking fluid, released packer, pulled out of hole keeping fluid going in hole while pulling tubing, closed-in overnight.
- 4-18-84: Estimated 400# casing pressure, blew well down, trip in hole with 1 joint 2 3/8" OD EUE 8rd. 4.70# N-80 tubing, 1 "R" nipple with check valve in place, 1 jt. ditto tubing, 1 Baker lockset packer with on/off tool & 1.81" profile nipple, testing tubing to 7000# below slips, ran 294 joints tubing above packer, total 296 joints in hole, well flowing up tubing & casing at times, putting a minimum amount of treated water in hole to keep well dead, removed BOP, set bottom of tubing at 9032' and packer at 9000', set with 14,000#, removed BOP, installed tree, tested tree to 5000# & held, loaded & tested tubing casing annulus to 1000# & held, swabbed well in with 5 swab runs, recovered estimated 35 bbls. load water with good flare, closed-in overnight.

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SOUTH BOYD #1

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- 4-19-84: 2000# tubing pressure, 975# casing pressure, blew casing pressure down, opened well up to pit with good flare & very small spray, rigged down pulling unit, flowed well 8 hrs., closed-in well.
- 4-20-84
thru
5-2-84 Shut-In, waiting on contract & pipeline connection
- 5-3-84: All surface production equipment set & wells tied in, all surface gas lines laid, tested & purged, put well on stream at 1:30 P.M., Shut-in pressure 2500#
- 5-4-84: TP 2200, rate 555 for 4 hrs., 1 1/2/64" choke, temporarily shut-in, re-welding pipe