



(SUBMIT IN TRIPLICATE)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Land Office Farmington

Lease No. 078094

Unit Evenson-Govt.

SUNDRY NOTICES AND REPORTS ON WELLS

NOTICE OF INTENTION TO DRILL	SUBSEQUENT REPORT OF WATER SHUT-OFF
NOTICE OF INTENTION TO CHANGE PLANS	SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING
NOTICE OF INTENTION TO TEST WATER SHUT-OFF	SUBSEQUENT REPORT OF ALTERING CASING
NOTICE OF INTENTION TO RE-DRILL OR REPAIR WELL	SUBSEQUENT REPORT OF RE-DRILLING OR REPAIR
NOTICE OF INTENTION TO SHOOT OR ACIDIZE	SUBSEQUENT REPORT OF ABANDONMENT
NOTICE OF INTENTION TO PULL OR ALTER CASING	SUPPLEMENTARY WELL HISTORY
NOTICE OF INTENTION TO ABANDON WELL	

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

July 22, 1959

Well No. 2-CD is located 140 ft. from S line and 750 ft. from E line of sec. 19

SE SE Sec. 19 17N 10W MTN
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Angel's Peak San Juan New Mexico
(Field) (County or Subdivision) (State or Territory)

The elevation of the derrick floor above sea level is 5975.05' ft.

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding jobs, cementing points, and all other important proposed work)

- 5-3-59 Drilled 15" hole to 284'. Ran 9 joints 10-3/4", 8rd, 32.75#, H-40, casing to 271.03'. Cemented w/200 sax regular cement, 2% Calcium Chloride. Plug down 9:30 A.M. 5-3-59.
- 8-3-59 Nippled up, tested blow out preventers with 500# for 30 min. Held OK.
- 9-16-59 Drld 9-7/8" hole to 5515'.
- 9-17-59 Cored 7-3/4" hole to 5515'-40 1/2'. Recovered 31 1/2'.
11' ss, lt gry, vy tan, sl P&P, sl glauc, bleeding oil
& gas, sl friable
21 1/2' sh, dk gry, sdy, carb, vy f throughout
OST #1 5506 1/2'-40 1/2' Open 60 min w/gd blow throughout. Gas
to surface in 50 min, too small to measure.
(continued)

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company The Frontier Refining Company

Address 4040 East Louisiana Ave.

Denver 22, Colorado

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Title Petroleum Engineer

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Rec 20' HGC drlg mud; 90'sl OC and HGC drlg mud.
ISIP 1632# and building
IFP 55#
FFP 70#
FSIP 1390# still building sharply after 45 min
IHP 2705#
FHP 2705#

5-21-59 Cored 7-3/4" 6210-52'. Recovered 42'.
20' sh & siltst, ti, no show
1' ss & sh intercalated, st & odor
6 1/2' ss, st & odor & fluor, ti to sl por, sl bubbling of gas
DST #2 6225-52': ISI 1 hour 20 min. Tool open 2 hours.
Opened w/good blow continuing throughout test. No gas to
surface. Recovered 60' sli GC mud, no water.
IHP 3000#
ISIP 500#
IFP 30#
FFP 30#
FSIP 135#
FHP 2965#

5-24-59 Cored 6252-92'. Recovered 31', lost 9'.
2' sh
1' ss, f, ti, odor, lt st & fluor
3' sh & coal interbedded
3' ss, f ti, fluor, odor, lt st
10' sh & coal interbedded
1' ss, f ti, st & odor, fluor
6' sh & coal interbedded
9' not recovered

5-25-59 Cored 6292-6342'. Recovered 50'.
1' sh, black
17' ss, f-med to med, no P&P, fluor, lt st & odor
10' ss & sh interbedded, lt fluor, vy ti
22' ss, med to coarse, some conglomeratic, gd odor, st &
fluor, gd P&P,
DST #3 6255-6342': Open 30 min. Gas to surface immediately,
oil in 5 min. Gas volume est 4 to 10 million CFD. 50' flare.
Surface pressure 1500#. Rec 270' mud-cut distillate, 540'
distillate-cut water.
IHP 2980#
ISIP 2900#
IFP 1020#
FFP 2135#
FSIP 2760#
FHP 2980#

5-28-59 Cored 6342-60'. Recovered 13'.
6' ss & congl, ti cemented, soft, crumbly, poor fluor,
no st & odor.
12' sh, lt gry-green, hd



Vertical line

Vertical line

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- 5-29-59 Ran 1367.43' 7-5/8" 3rd long T&C, 26.40, N-30, 45 jnts, and 166 jnts 5019.18' 7-5/8", 8rd, short T&C, 26.40#, J-55, total 211 jnts, 6383.51', set at 6394'. Float collar 6362.77'. Ran 10 centralizers. Cement baskets 5547.66' and 1898.29'. Stage collar 1872.49'. Circulated pipe for 30 mins, lost returns momentarily, started cementing and gained partial returns. Gained full returns w/half of cement mixed. Cmt'd w/250 cu ft 50-50 Pozmix, 2% added gel, 3125# Gilsonite (12# per sack). Plug down 6:30 PM 5-28-59. WOC and nipping up for completion. Ran Temperature Survey to 6336'. Estd top of cement at 5203'. Preparing to cement 2nd stage. Cmt'd 2nd stage w/75 cu ft 50-50 Pozmix and 2% CaCl₂. Plug down 9:30 AM 5-29-59. Set slips, cut off casing, nipped up. Ran Temperature Survey to 1810', estd top of cement at 1600'. Ran 2-7/8" drill pipe to 1867'. Drilled DV tool. Pressured up to 1300# for 15 mins, held OK.
- 5-31-59 Ran DP to 6331.36'. Drilled cmt 6331-6360'. Pressured up to 1500# for 15 mins, no leaks. Pulled drill pipe. Ran Lane-Wells Gamma Ray-Neutron, Cematron logs to 6360'. Perfd w/4 jets per foot 6331-36 elec log measurement (6329 Gamma-Ray) Ran 10 stands drill pipe, blew water, unloading well.
- 6-1-59 Blew water down. Estimated gas volume 1 million CFPD. Sand-frac perfs 6331-36 w/100,000# sand & 1541 bbls water. Breakdown pressure 3500-3300 w/152 bbls. Treating pressure at 1/2# per gal 3400# max, 3300# min; 1# per gal 3400# max, 3100# min; 1 1/2# per gal 3300# max, 3200# min; 2# per gal, 3500# max, 3200# min; 2 1/2# per gal 3500# max, 3400# min.
- 6-5-59 Hooking up gas line at 900# drilling gas pressure. Cleaning out to 6360'. Gas volume 1,626,000 CFPD. Flowing thru perfs 6331-36'.
- 6-6-59 Pulled 2-7/8" DP. Ran Guiberson cast iron bridge plug to 6324'. Perfd w/4 jets per foot 6300-16' Gamma Ray (6302-18' Elec log). Sand frac'd perfs w/63,000# sand, 60,000 gals water. Breakdown pressure 3500-2500 w/300 bbls water. Pressures at 1# per gal 3300# max, 3000# min; 1 1/2# per gal 3100-2900; 2# per gal 2900-2900; 2 1/2# per gal 3500-2900. Flushed w/292 bbls water. Sand screened out. Left 114' sand in pipe.
- 6-10-59 Set Guiberson cast iron bridge plug 6220'. Perfd w/4 jets per foot 6184-96 Elec log (6184-96 Gamma Ray). Frac'd with 100,000# sand, 570,120 gals total water, 44,520 gelled water, 12,600 gals water, 1,000 gals breakdown acid. Breakdown pressure 2500-1900# w/200 bbls water. Pressures 1# per gal 1900-1700#, 2# per gal 1900-1700, 3# per gal 2000-1700. Average injection rates, frac flush 60 bbls per min. Standing pressure 11,000 immediately, 800 in 30 mins. Shut in well 4 hours. Started cleaning out 9:30 PM 6-9-59. Well unloaded 2,000' fluid. Blowing good. Making one-half frac water. Will gauge gas volume when sand stops.
- 6-11-59 Gauge from perfs 6184-96 gas volume 2,530 McFPD. Drilled bridge plug 6220', now drilling bridge plug at 6324'.



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- 6-13-59 Drilled and pushed bridge plug to 6356'. Well gauges to 6 to 7 million cu ft after 15 min shut in. Ran junk basket to 6190'. Set Baker Model D Packer at 6150'. Plug packer w/DR packer plug. Perfs 5523-31 w/4 shots per foot. Prep to sand-frac.
- 6-14-59 Sand-frac w/50,000# total sand, 25,000 20-40 sand, 25,000 10-20 sand, 1,002 bbls oil. Breakdown 1900-1800# w/300 bbls. Frac w/2 $\frac{1}{2}$ #/gal thruout treatment, 2300# max, 1900# min. Flushed 2,000# max, 1900# min. 300 bbls. Standing pressure 1100# immediately, 650# in 30 mins. Average injection rate 60 bbls per min. 1092 bbls load oil to recover. Flowed, blew out 283 bbls load oil in 13 hrs, 809 bbls load oil to recover.
- 6-17-59 Ran 195 jnts 2" EUE J-55 tubing for Dakota production w/tubing perfs at 6162'KB & locator assembly at 6150'KB set w/10,000# tension. While running Dakota tubing, the Gallup zone unloaded approx 250 bbls load oil. Killed well w/394 bbls load oil. Load oil to recover is 1014 bbls. Installed dual tubing head; prep to run Gallup tubing string. Ran 107 jnts 2" tbg set at 6162'. Set dual tubing head, picked up 2" tubing.
- 6-18-59 Waiting on flange to nipple up, set slips on Dakota tubing string. Picked up tubing, well unloaded. Closed rams. Waiting on pump truck to kill well. Unable to kill well w/oil.
- 6-19-59 Mixing mud, pumping into formation, no luck. Well still kicking. Pumped in approx 800 bbls mud. Mud wt 9.1. Pumping thru annulus and tubing. 1200 to 1500# pressure. Pumping mud to kill well w/2000# surface pressure. Mixing two pits mud w/Baroid weighting material to kill well.
- 6-20-59 Killed well w/11.6# mud. Vis 49, wl 5.2. Set plug choke in Dakota string at 350'. Set plug choke in Gallup at 50'. Ran 2 tubing for Gallup string.
- 6-25-59 Pulled tubing, ran 90 jnts 2-3/8" tubing, installed dual head, nipped up blow out preventer. Ran Dakota tubing to 6161'. No left turn latching sub at 6150'. Otis pump-out plug at 6149'. Rubber coated tubing at 5519-5534'. Running Gallup tubing string.
- 6-26-59 Ran Gallup tubing string to 5501'. Perforated nipple at 5501-5495'. Hooked up christmas tree, displaced mud with 221 bbls oil. Released rotary at 7:00 PM 6-25-59. Well shut in overnight. 1384 bbls load oil to recover from the Gallup.
- 7-14-59 Dakota formation tested 8,200 MCF/24 hrs (calculations approximate) absolute open flow potential, plus 31 bbls oil in 3 hrs. Tubing pressure 550 PSIA. Casing pressure 1274 PSIA and constant. Gallup tubing pressure 1158 PSIA. Will test Gallup after 7-day shut in.
- 7-22-59 Gallup flowing gas at 4,217 Mcf to 435 Mcf in 24 hours. Tubing pressure 1260# to 30#, no oil, 1-1/2 barrels water. Waiting on pipeline connection.

