



100

Idol & J. M.

REF ID: A58010

16-48094-2 U. S. GOVERNMENT PRINTING OFFICE

## HISTORY OF OIL OR GAS WELL

[illegible]

**FORMATION RECORD—Continued**

2000

SHELL OIL COMPANY

Bisti Water Well  
WELL NO. W-2

Bisti

# DRILLING REPORT

FOR PERIOD ENDING

1-11-61

19

(SECTION OR LEASE)

T. 25 N., R. 11 W.

(TOWNSHIP OR RANCHO)

(FIELD)

San Juan, New Mexico

(COUNTY)

DAY	DEPTHS		REMARKS
	FROM	TO	
			Location: 1922' S. and 2471' E. of NW corner Section 19, T. 25 N., T. 11 W., N.M.P.M., San Juan County, New Mexico
			Elevations DF 6454.1 GR 6445.0 KB 6455.6
1-6 To 1-7	0	1570	Spudded 5:30 P.M. 1-6-61. Ran and cemented 2 jts. (70) 10-3/4", 40-1/2#, H-40 casing at 82' with 50 sacks cement treated with 2% calcium chloride. Flanged up and waited on cement. Pressure tested casing and BOP with 800 psi, OK.
1-8 To 1-10	1570	3904	Drilled 2334'. Ran Induction-Electrical Survey and Microlog.
1-11	3904 TD		Ran and cemented (3893') 7", 23#, J-55 casing at 3904' with 250 sacks cement 20% Diacel and 2% calcium chloride. Flanged up. Released rig 12:00 noon 1-11-61.
			Mud Summary Wt. 9.3-9.5#/gal. Vis. 44-45 sec WL 9-10 cc FC 2/32"
			Contractor: Great Western Drilling Co. Contractor Pusher: R. L. Andes Drillers: L. A. Vernon G. L. Larry S. E. Garvin Company Pusher: R. A. Standifer
			END

## CONDITION AT BEGINNING OF PERIOD

HOLE			CASINO SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE SIZES 4-1/2"				

M. W. McGarry, Jr.

SHELL OIL COMPANY

WELL NO. W-2

DRILLING REPORT  
FOR PERIOD ENDING

Section 19

(SECTION OR LEASE)

T. 25 N., R. 11 W

(TOWNSHIP OR RANCHO)

Bisti

(FIELD)

San Juan

(COUNTY)

1-21-61

DAY	DEPTHS		REMARKS
	FROM	TO	
1-12	3904 (TD)		Rigged up to perforate. Laid surface lines.
1-13			Bullet perforated 2 holes/ft. 2785-95, 2856-66, 2871-81, 2926-31, 2944-49, 2976-91, 3016-26, 3061-66, 3076-3101, 3124-29, 3146-56, 3164-69, 3174-84, 3201-11, 3216-21, 3226-41, 3256-61, 3336-61, 3371-3426, 3618-23, 3645-60, 3678-83, 3688-98, 3710-30, 3733-38, 3751-56, 3759-69, 3772-77, 3784-94.
1-14			Ran Reda pump on 3" tubing to 2768' equipped with Maihak pressure recorder.
1-15			Started pumping at noon 1-15-61. Static fluid level before start 363'. Initial rate 4500 B/D declining to 1900 B/D in 1 hr., 35 min. Pumped off. Fluid sample after 111 bbls. produced was 3-1/2% oil. Fluid sample after 194 bbls. produced was 4% oil. Shut pump down.
1-16			Shut in.
1-17			Pumped to tank on location approximately 6 hrs. Producing 322 bbls. gross fluid, 311 bbls. water, 11 bbls. oil. Produced intermittently from 8:35 A.M. to 2:45 P.M. (after pumping approximately 15 minutes the drawdown reduced the producing rate to Reda pump minimum and pump automatically shut down for 30 minutes). Manually shut pump down at 2:45 P.M.
1-18			Pumped to tank on location for 5 hours. Produced 349 barrels gross fluid, 337 barrels water, 12 barrels oil. Produced from 9:45 A.M. to 2:45 P.M. Oil gravity 34.7 at 60° F. Plan to pull Reda pump 1-19-61.
1-19			Pulled Reda pump -- plan to run another Reda pump (smaller) back in on the 3" tubing.
1-20			Ran smaller Reda pump to 2739'. Pump intake at 2704', Maihak at 2605'. Disposal line plugged.
1-21			Ran pump 1 hour and shut down to repair flow line. Started pump and ran 2-3/4 hrs. and shut down. Maximum rate 3111 B/D, minimum rate 2286 B/D.

END

CONDITION AT BEGINNING OF PERIOD				
HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE SIZES 4-1/2"				

M. W. McGarry, Jr.

SIGNED

SHELL OIL COMPANY

WELL NO. W-2

DRILLING REPORT  
 FOR PERIOD ENDING

Section 19

(SECTION OR LEASE)

T. 25 N., R. 11 W

(TOWNSHIP OR RANCHO)

Bisti

(FIELD)

San Juan

(COUNTY)

1-28-61

DAY	DEPTHS		REMARKS
	FROM	TO	
1-22	3904 (TD)		Well pumped continuously at 1800 B/D rate with 250 psi flow line pressure and 96 psi bottom hole operating pressure. Making estimated 1/2 bbl./hr. oil. Accumulating oil in tank for more accurate gauge.
1-23			Pumped continuously at 1750 - 2000 B/D gross rate, 13 B/D oil rate, with back pressure of 250 psi. Fluid level 55' above pump intake.
1-24			Pumping at rates varying between 1550 and 2300 B/D. Pump shut down 3 times (1/2 hour each time) in last 24 hours. Oil rate 9 B/D based on total oil produced in last 44 hours.
1-25			Pumped at 1400 - 1600 B/D rate with 13-1/2 hour shut downs in last 24 hrs. Total production last 24 hours 1090 barrels including 3 barrels oil. Wellhead back pressure 330 psi. Bottom hole operating pressure 127 psi.
1-26			Pumped at approximately 1500 B/D rate with 15-1/2 hr. shut downs in 19 hours. Increased wellhead back pressure from 400 psi to 500 psi at 10:30 A.M. and shut down only one time (1/2 hr.) during next 5 hour period (3:30 P.M.). Gauged into tank on location for 3 hours. Produced 191 barrels (during continuous producing interval). Total production last 24 hrs. 1000 barrels. Bottom hole operating pressure 143 psi.
1-27			Pumped at approximately 1500 B/D rate with 16-1/2 hr. shut downs. Gauged into tank on location for 5 hours (2-1/2 hrs. actual producing time) and produced 170 barrels. Total production last 24 hours, 1000 barrels including 8 barrels oil. Wellhead pressure 720 psi with bottom hole pressure approximately 150 psi. Cumulative production through 2:30 P.M. 1-27-61, 9600 barrels including 31 barrels oil.
1-28			Pumped at approximately 1270 B/D rate with 5-1/2 hr. shut downs. Gauged into tank on location for 4 hours (2-1/2 hrs. actual producing time) and produced 133 barrels (1272 B/D rate) gross including 1 barrel oil. Total production last 24 hours 1000 barrels including 4 barrels oil. Wellhead pressure 610 psi with bottom hole pressure approximately 143 psi.
END			

CONDITION AT END OF PERIOD

HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE 4-1/2"				
SIZES				

M. W. McGarry, Jr.

SIGNED

SHELL OIL COMPANY

WELL NO. W-2

Bisti

(FIELD)

San Juan

(COUNTY)

DRILLING REPORT  
 FOR PERIOD ENDING

2-8-61

Section 19

(SECTION OR LEASE)

T. 25 N., R. 11 W

(TOWNSHIP OR RANCHO)

DAY	DEPTHS		REMARKS
	FROM	TO	
1-29	3904 (TD)		Pumped 700 B/D gross, 0.5 B/D oil in last 24 hours with pump operating 16 hours. When pump is operating, pumps 1240 B/D rate. Fluid level back pressure 690 psi.
1-30			Pumped 850 barrels gross, 1 barrel oil in last 24 hours. Pumped off and shut down 9 times for total of 4-1/2 hours off. Wellhead back pressure 750 psi, operating bottom hole pressure 150 psi.
1-31			Pumped 880 barrels gross, no oil in last 24 hours, with 4 1/2 hr. shut downs. Wellhead back pressure 500 psi, bottom hole operating pressure 143 psi.
2-1			Pumped 16 hours in last 24 (16 1/2 hr. shut downs). No gauge. Operating bottom hole pressure 143 psi. Wellhead back pressure 500 psi.
2-2			Pumped 1100 barrels gross, 2 barrels oil in last 24 hours, with 21 1/2 hr. shut downs. Bottom hole operating pressure 182 psi, wellhead back pressure 350 psi.
2-3			Pumped 1000 B/D gross, 1 B/D oil, wellhead pressure 350 psi, bottom hole operating pressure 182 psi.
2-4			Filled frac tanks with water on location.
2-5			Filling frac tanks.
2-6			Filling frac tanks. Moving in rig to pull pump.
2-7			Pulled tubing and Reda pump.
2-8			Sand-water fractured entire perforated interval with 100,000 gallons water, 75,000# 10-20 mesh sand followed by 21,000# 8-12 mesh gravel. Displaced with 110 barrels water. Maximum rate 68 barrels per minute, minimum rate 42 barrels per minute, maximum pressure 2400 psi, minimum pressure 1200 psi. Dropped 525 balls in 3 stages. Immediate SIP 1000 psi. SIP after 2 hours 90 psi. Bled pressure off, ran bailer and found top of fill at 3630'. Bailed for 4 hours. Lowered fill to 3653'. Shut down overnight. Ran bailer after 11 hours, found fill at 3653'.

END

CONDITION AT BEGINNING OF PERIOD

HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE SIZES 4-1/2"				

M. W. McGarry, Jr.

SIGNED

SHELL OIL COMPANY

WELL NO. W-2

Bisti

(FIELD)

San Juan

(COUNTY)

DRILLING REPORT  
FOR PERIOD ENDING

2-21-61

Section 19

(SECTION OR LEASE)

T. 25 N., R. 11 W.

(TOWNSHIP OR RANCHO)

DAY	DEPTHS		REMARKS
	FROM	TO	
2-9	3904 (TD)		Bailed frac sand, gravel and rubber balls to 3740'. Shut down overnight. Checked fill at 3740'. Fluid level 300'±.
2-10			Bailed from 3740 to 3825'. Returns mostly 10-20 sand below 3770'.
2-11			Ran Reda pump to 2739', Maihak to 2573'. Started pumping 3:30 P.M. 2-11-61 at 3500 B/D rate, initial fluid level 556'.
2-12			Pumped 24 hours at average rate of 2900 B/D. Fluid levels 1651-86, Maihak readings 475-480 psi.
2-13			Pumped 2700 B/D water, no oil. Fluid level 1709-40' (based on Maihak readings). 70 psi wellhead pressure (friction head on line to disposal area).
2-14			Pumped 2600 B/D (2 hr. test). Fluid level 1960' based on Maihak reading. Wellhead pressure 70 psi.
2-15			Pumped 2600 B/D water, trace oil (2 hr. test). Fluid level 1907-2053' (Maihak).
2-16			Pumped 2600 B/D water, trace oil (2 hr. test). Fluid level 2050'± (Maihak).
2-17			Pumped 2520 B/D (3 hr. test), trace oil. Maihak fluid level 2160'±.
2-18			Pumped 2500 B/D water (2 hr. test). Maihak fluid level 2200'±, CP 40 psi.
2-19			Pumped 2450 B/D (2 hr. test). Maihak fluid level 2210'±. CP 25 psi. Choked back to 500 psi tubing pressure to establish lower rate. Pumped 1880 B/D rate on 1 hr. test.
2-20			Pumped 1900 B/D water (3 hr. test), TP 525, CP 25. Maihak pressure 256 psi at 2573'. Fluid level 2060'.
2-21			Pumped 1800 bbls. water in 23-1/2 hrs. (1/2 hr. shut down for no obvious reason) (3-1/2 hr. test). TP 525, CP 25, Maihak fluid level 2020'±.

END

CONDITION AT BEGINNING OF PERIOD

HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE SIZES 4-1/2"				

M. W. McGarry, Jr.

SIGNED

SHELL OIL COMPANY

WELL NO. W-2

Bisti

(FIELD)

San Juan

(COUNTY)

DRILLING REPORT  
 FOR PERIOD ENDING

3-7-61

Section 19

(SECTION OR LEASE)

T. 25 N., R. 11 W.

(TOWNSHIP OR RANCHO)

DAY	DEPTHS		REMARKS
	FROM	TO	
2-22	3904 (TD)		Pumped 1800 B/D water (4 hr. test). Pump operated continuously. Maihak fluid level 2035'. TP 525, CP 25.
2-23			Pumped 1818 B/D water (4 hr. test). Maihak fluid level 2030'±. CP 24, TP 550. Restricted rate by increasing back pressure to 750 psi.
2-24			Pumped 1392 B/D water (4 hr. test). TP 860, CP 26. Maihak fluid level 1946'.
2-25			Pumped 1550 B/D water (4 hr. test). TP 840, CP 25. Maihak fluid level 1900'.
2-26			Pumped 1510 B/D water (4 hr. test). TP 870, CP 25. Maihak fluid level 1900'.
2-27			Pumped 1510 B/D water (not tested -- changing lines to obtain water quality test). TP 820, CP 25. Maihak fluid level 1950'.
2-28			Pumped 1608 B/D water (3 hr. test). TP 840, CP 25. Maihak fluid level 1910'.
3-1			Pumped 1450 B/D rate (estimated). TP 920, CP 25. Maihak fluid level 1890'. Rigged up for making quality tests on water.
3-2			Pumped 1600 B/D water (1 hr. test). TP 820, CP 25. Maihak fluid level 1960'.
3-3			Pumped 1600 B/D water (not tested). TP 850, CP 25. Fluid level (Maihak) 1930'. Moved from disposal area to well for quality tests.
3-4			Pumped 1600 B/D water (not tested). Obtaining quality tests. Pump for filter tests failed during night.
3-5			Off 8 hours for electrical and pump malfunctions.
3-6			Pumped until 11:00 A.M. 3-6-61. Shut down and started pressure buildup. Moved out transformers. Completed quality tests on water.
3-7			Obtaining pressure buildup.

CONDITION AT END OF PERIOD

HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE SIZE <u>4-1/2"</u>				

M. W. McGarry, Jr.

SIGNED



SHELL OIL COMPANY

WELL NO. W-2

Bisti

(FIELD)

San Juan

(COUNTY)

DRILLING REPORT

FOR PERIOD ENDING

3-15-61

Section 19

(SECTION OR LEASE)

T. 25 N., R. 11 W.

(TOWNSHIP OR RANCHO)

DAY	DEPTHS		REMARKS
	FROM	TO	
3-8 to 3-14	3904 (TD)		Obtained pressure buildup.
3-15			Pulled Reda pump and laid down 3" tubing. Shut well in.

END

CONDITION AT BEGINNING OF PERIOD

HOLE			CASING SIZE	DEPTH SET
SIZE	FROM	TO		
17"	0	82	10-3/4"	82
9"	82	3904	7"	3904
DRILL PIPE SIZES <u>4-1/2"</u>				

M. W. McGarry, Jr.

SIGNED