

Well No. 6 Lease Gallegos Canyon Unit

Operator BENSON & MONTIN

REPORT
DRILLING AND COMPLETION RECORD

<input checked="" type="checkbox"/>	A-1	SUMMARY OF WELL LOGS
<input checked="" type="checkbox"/>	A-2	"
<input checked="" type="checkbox"/>	B	WELL IDENTIFICATION
<input checked="" type="checkbox"/>	C	WELL LOGS
<input type="checkbox"/>	D	WELL LOGS
<input checked="" type="checkbox"/>	E	"
<input checked="" type="checkbox"/>	F	DETAILS OF DRILLING AND COMPLETION HISTORY
<input type="checkbox"/>	G	"
<input type="checkbox"/>	H	"
<input type="checkbox"/>	I	"
<input type="checkbox"/>	J	"
<input type="checkbox"/>	K	DRILL STRING TESTS
<input type="checkbox"/>	L	DRILLING LOGS
<input checked="" type="checkbox"/>	M	SAMPLE DESCRIPTION
<input type="checkbox"/>	N	CORE DESCRIPTION
<input type="checkbox"/>	O	CORE ANALYSIS
<input type="checkbox"/>	P	DETAILS OF PRODUCTION TESTS

(IN POCKET)

<input checked="" type="checkbox"/>	ELECTRIC LOG SCALE
<input type="checkbox"/>	"
<input type="checkbox"/>	RADIOACTIVE LOG SCALE
<input type="checkbox"/>	"
<input type="checkbox"/>	SAMPLE LOG SCALE
<input type="checkbox"/>	TEMPERATURE SURVEY

FILE NO. 6 LEASE Gallegos Canyon Unit
 OPERATOR Benson & Montin

SUMMARY

	MONTH	DAY	YEAR
XXXX surveyed	4	28	51
	9	11	51
	9	16	51
	1	9	52
	12	26	51
	2	8	52
	2	8	52

LOCATION DATA	
Wildcat	Pictured Cliffs
San Juan	New Mexico
1340 FEET North	South
1110 FEET East	West
22	28 N 12 W
5651	5660
5651	

Drilled to 1433' with rotary and set casing. Drilled in with cable tools to TD of 1498'. Plugged back to 1478' with calseal and shot 1422-78' with 88 qts. SNG.

Casing: 10 3/4" @ 312' with 150 sks
 5 1/2" @ 1433' with 200 sks

Production Tests:

Natural: 550 MCF/day and 2 gal SW/hour
 at TD 1498', open approximately 4 days

After Shot: 2,830 MCF - Official State Potential

1. This is one of seven exploratory wells drilled to test the Pictured Cliffs formation. This well was initially projected to the Dakota formation, but plans were changed after the well blew out in the Farmington sand at TD 867' and caught fire, making estimated one to two million cubic feet of gas per day. It was then decided to complete this well in the Pictured Cliffs and to drill another (#8) to test the Dakota.
2. No participating areas have yet been established.

1000

100-4427

Note: All samples and records from surface to TD 867' destroyed by fire

DRILL STEPS AND SUMMARY

CORING SUMMARY

SHORT CLARIFICATION

See Drilling History for Details.

ACADEMIC SUMMARY

10 3/4 301	10	33	short	J-55	8rd	312	150	com	circ	-	-	-
5 1/2 1426	44	10	short	J-55	8rd	1433	200	com	N.T.	2	6	Weath.

13"	surf	312	7 7/8	902	1433
9"	312	902	4 3/4	1433	1498

tubing	1"	1454'	69	BLP	1.6	BLP	1461	open	-	1/8"	1440	1441
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OTHER EQUIPMENT						
XXXXXXXXXXXXXXXXXX	Orifice	1/8"	1/9/52	1380	12"	BLP Nipple with screen
XXXXXXXXXXXXXXXXXX	Orifice	1/16"	1/9/52	1180	12"	BLP Nipple with screen
XXXXXX	Orifice	1/16"	1/9/52	780	12"	BLP Nipple with screen
XXXXXXXXXXXXXXXXXX	Orifice	1/16"	1/9/52	380	12"	BLP Nipple with screen

NONE

Rectorhead Model R, 10 3/4 x 5 1/2
 5 1/2" x 3" swaged nipple; 3" WECO Union, Mandrel; 2" outlets
 2 - 2" plug valves 500# W.P.
 2 - 1" plug valves 500# W.P.

INDIVIDUAL WELL GEOLOGICAL SUMMARY

LOCATION

Sec. 22 -T28N-R12W

1340' FSL

1110' FWL

ELEVATION K 8 5660'

WELL NO. 6

LEASE Callegos Canyon Unit

OPERATOR Benson & Montin

FIELD Wildcat

COUNTY San Juan

STATE New Mexico

GEOLOGIST A. R. Greer

ADDRESS Benson & Montin

STRATIGRAPHY				
FORMATION	DEPTH TO TOP		ELEVATION OF TOP	
	SAMPLES	EL. OR RA. LOG	SAMPLES	EL. OR RA. LOG
Ojo Alamo	(Approx) *	200	5460 (Approx) *	
Farmington Sands	*	645	*	5015
Pictured Cliffs Sand	1427	1427	4233	4233
* Samples destroyed by fire				

KNOWN OIL, GAS AND WATER SANDS (DATA NEEDED FOR WELL LOGS WITH STATE REGULATIONS)				
FORMATION	O. G. W.	FROM	FORMATION	O. G. W.
Ojo Alamo	W	200 300		
Farmington Sands	G	645 870		
Pictured Cliffs	G	1427 1498 /		

STRUCTURAL POSITION (RELATIVE TO OFFSET OR SIGNIFICANT WELLS)

71' lower than #4 GCU
61' higher than #3 GCU

COMPLETION DATA (FORMATION COMPLETED IN AND DEPTHS, IN FEET, OF DRILLING IN)

See Drilling History

QUALITY OF PAY (GEOLOGIST'S OPINION OF GROSS AND NET PAY OR KNOWN AND COMPARISON WITH OFFSET OR SIGNIFICANT WELLS)

Gross Section - 71' of sand were drilled (1427-98)
Net Pay - Approximately 45' from 1427-72 is gas productive, sand quality comparable to #4 GCU

OTHER SIGNIFICANT OIL OR GAS SHOWINGS

FORMATION	DEPTHS	REMARKS (QUALITY OF SHOWING)
Farmington S S	645 - 670	Blew out estimated one to two million cubic feet per day.

San Juan
Pictured Cliffs

New Mexico

6

Wildcat
Gallegos Canyon Unit
Benson & Montin

Natural Production Tests (While drilling in with cable tools - Time measured from drlg shoe)

12/26/51	F	2	42	0	TD1443
12/30/51	F	93	57	0	TD1443
12/30/51	F	96	390	0	TD1449
12/30/51	F	100	650 4	0	TD1455
12/31/51	F	114	650	0	TD1455
12/31/51	F	124	687	0	TD1463
1/1/52	F	146	720	0	TD1466
1/1/52	F	152	687	0	TD1475
1/2/52	F	165	615	0	TD1475
1/3/52	F	194	615	0	TD1475 (40 hour fill up test)
1/3/52	F	200	583	0?	TD1493
1/4/52	F	212	550	1.15	TD1498 (10 hour fill up test)

Tests After Shot

1/7/52	F	1	2500	heavy spray	5 $\frac{1}{2}$ " Open (1 hour after unloading shot)
1/8/52	F	22	1340	spray	5 $\frac{1}{2}$ " Open (22 hours after unload- ing shot)
1/9/52	F	45	1200	light spray	5 $\frac{1}{2}$ " Open (45 hours after unload- ing shot)

WELL NO. 6 LEASE Gallegos Canyon Unit
 OPERATOR Benson & Montin
 WELL DRILLING AND COMPLETION HISTORY

DATE	REMARKS
4-28-51	Location surveyed
8-1-51	Location approved by U.S.G.S.
9-8-51	Moving in rig
9-9-51	Moving in rig
9-10-51	Moving in rig
9-11-51	Rigging up rig
9-12-51	Rigging up rig
9-13-51	Rigging up rig
9-14-51	Rigging up rig
9-15-51	Preparing to spud
9-16-51	Spudded
9-17-51	3:00 AM Set 10 jts. 10 3/4" Casing at 312' with 150 sks
9-18-51	TD 312' Waiting on cement
9-19-51	5:00 AM TD 867'. Farmington sand blew out and well caught fire with Kelly in hole. Rams would not close around Kelly. Driller did not have time to pick up Kelly.
	11:00 AM TD 867'. Tied in to drilling line with truck and pulled Kelly above blowout preventer rams. Rams would not close - apparently rubber burned out. Well flowing estimated one to two million cubic feet of gas with no noticeable water.
	1:30 PM TD 867'. Wrapped soft line around base of Kelly and lowered into rams, putting out fire. Pumped 655 sacks of mud weight material into well through fill-up line. Well dead at 1:30 PM
9-20-51	TD 867'. Shut down with drill pipe in hole. Repairing rig.
9-21-51	" "
9-22-51	" "
9-23-51	" "
9-24-51	" "

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WELL DRILLING AND COMPLETION HISTORY

DATE		REMARKS
9-25-51		TD 867'. Shut down with drill pipe in hole; repairing rig.
9-26-51		" "
9-27-51		" "
9-28-51		" "
9-29-51		" "
9-30-51		" "
10-1-51		" "
10-2-51		" "
10-3-51		" "
10-4-51		" "
10-5-51	12:00 Noon	TD 867'. Preparing to mix mud. Additional repairs necessary.
10-6-51	8:00 AM	TD 867'. Rig repaired and ready to resume operations. Commenced mixing mud. Attempted to circulate through drill pipe. Formation broke down at 700# and took 75 bbl of mud at 400#. Using 12# mud.
	9:00 PM	Mixing mud to attempt to reverse circulate
	12:00 M	Unable to reverse circulate.
10-7-51	8:00 AM	TD 867'. Backed off 4 joints of drill pipe. Preparing to wash over pipe in hole.
	6:00 PM	Washing over drill pipe at 350'.
10-8-51	8:00 AM	TD 867'. Washing over drill pipe at 585'.
10-9-51	7:00 AM	TD 902'. Washed over and recovered all drill pipe. Measured TD 867'. Drilled to 902. Well kicked out 11.8# mud. 12.2# mud holds well down. Waiting on Halliburton to squeeze off gas sand.
	2:00 PM	With 12.2# mud in hole and drill pipe run to 870' open ended, displaced mud in drill pipe with water and closed rams and pumped 150 bbl of water down drill pipe, pumping pressure approximately 406#. Shut in 20 minutes, static pressure on drill pipe 400#. Displaced water in drill pipe with mud. Static pressure in drill pipe 245#. Static pressure on annulus 255#.

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WELL DRILLING AND COMPLETION HISTORY

DATE	REMARKS
4:30 PM	After standing 1 1/2 hours, no change in static pressures. Ittherefore appears that the 150 bbl. of water did not enter the gas sand and that cement pumped into the well also would not enter the gas sand and it would therefore be useless to attempt to squeeze the gas sand off. Shut down pending decision relative to squeezing.
10-10-51 6:30 AM	TD 902'. Contractor advised of Unit Operator's decision to complete well in Pictured Cliffs sand and skid rig to different location to drill Dakota test.
10-11-51 6:00 AM	TD 950'. Drilling. Commenced 7 7/8" hole at 902'.
10-12-51	TD 1200'. Drilling.
10-13-51 2:00 AM	TD 1433'. Ran Schlumberger. Laid down drill pipe. Changed rams.
11:30 AM	TD 1433'. Plug down after running 44 joints of 5 1/2" 14# J-55 casing, set at 1433. Cemented with 200 sacks common cement mixed with 1% gel. Good circulation maintained throughout job.
10-14-51 through 12-20-51	Waiting on rotary to move off #8 before drilling in.
10-21-51	Re-surveyed location. Correct location is 1340' FSL and 1110' FWL Sec. 22, T28N, R12W
12-21-51	TD 1433. Moving in cable tools
12-22-51	Rigging up cable tools
12-23-51	Finished rigging up cable tools. Swabbed water from hole.
12-24-51 8:00 AM	Commenced drilling cement
11:00 PM	Drilled to 1435'.
12-25-51	Shut down for Christmas
12-26-51 8:00 AM	Corrected TD 1428. Making small volume of gas through undrilled 5' of cement. After shut down for 32 hours bailed one gallon of water.
2:00 PM	TD 1443. Measured 2" water/1" (42 MCF) Shut down to test for water and rig up stand pipe.
4:00 PM	2 hour fill-up test. 1 quart mud, no water.
6:00 PM	4 hour fill-up test. No water.
8:00 PM	At TD 1443 tools stuck when running new bit. Pulled line out of rope socket. Shut down to get fishing tools.

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WELL DRILLING AND COMPLETION HISTORY

DATE	REMARKS
12-27-51 8:00 AM	TD 1443. Waiting on fishing tools.
12-28-51 8:00 AM	TD 1443. Waiting on fishing tools.
12-29-51 8:00 AM	TD 1443. Waiting on fishing tools.
10:00 AM	Commenced fishing.
6:00 PM	Unable to recover fish. Plan to run different type combination socket.
12-30-51 11:00 AM	Recovered fish. Ran boiler. 3 1/2 days fill-up showed no water.
12:00 N	TD 1443. After open 4 days gauged 3 3/4" water/1". (57 MCF)
2:00 PM	TD 1449. Measured 11" water/2" (390 MCF)
4:00 PM	TD 1455. Measured more than 30" water/2". (More than 650 MCF) Shut down overnight.
12-31-51 8:00 AM	TD 1455 Measured 30" water/2" (650 MCF)
6:00 PM	TD 1463. Measured 2.5" Mercury/2" (687 MCF). Shut down overnight.
1-1-52 12:00 N	TD 1466. Measured 2.2" Mercury/2" (650 MCF)
4:00 PM	TD 1471. Measured 2.7" Mercury/2" (720 MCF). Measured line in. Corrected TD 1466.
10:00 PM	TD 1475. Measured 2.5" Mercury/2" (687 MCF). Shut down 12 midnight.
1-2-52	Shut down on daylight tour. Driller took his wife to hospital.
11:00 AM	TD 1475. Measured 2.0" Mercury/2" (615 MCF)
4:00 PM	Shut down. Evening tour driller ill. (No rig time this day)
1-3-52	Shut down on morning tour.
4:00 PM	TD 1475. Measured 2.0" Mercury/2" (615 MCF). 40 hour fill up test. No water.
10:00 PM	TD 1493. Measured 1.8" Mercury/2" (583 MCF)
12:00 PM	TD 1498. Shut down overnight.
1-4-52	TD 1498. 10 hour fill-up test showed 20 gallons salt water. (2 gal/hour) Measured 1.6" Mercury/2" (550 MCF)
10:00 PM	On bottom with 66 joints, 1" tubing. Waiting on water truck to repair pump.
1-5-52 3:00 AM	Commenced pumping water.
5:00 AM	Hole almost loaded with about 30 bbl. water. All valves on well head frozen. Released water trucks.
10:00 AM	Thawed out valves. 15# on well head. Blew down and commenced pulling tubing.
12:00 N	Preparing to spot calseal plug

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WELL DRILLING AND COMPLETION HISTORY

DATE	REMARKS
	4:00 PM Set calseal plug 1478-98
	9:30 PM Loaded 88 quarts SNG from 1442-78. Tamped with 3 feet of gravel and 6' calseal below shoe and 52' calseal in casing.
1-6-52	9:50 AM Shot went off. Commenced drilling calseal.
	4:00 PM Drilled calseal to 1432. Shut down until daylight to drill in. Commenced thawing out vent line.
1-7-52	12:30 PM Drilled out calseal plug and gravel. Drilled to 1478.
	1:00 PM Commenced bailing.
	1:30 PM Unloaded hole.
	3:00 PM After flowing one hour, gauged .85" Mercury/5" (2500 MCF) with spray of water.
1-8-52	8:00 AM TD 1498. PBTD 1478. Cleaning out.
	12:00 N Cleaning out at 1470. Measured 9½" Mercury/2" (1340 MCF) 22 hours after unloading hole. Water decreasing.
	4:00 PM Cleaning out to 1478. Shut down overnight.
1-9-52	10:30 AM Cleaning out bridge 1470. Breaking down tools preparing to run tubing. Measured 1,200 MCF 45 hours after shot.
	3:00 PM TD 1498. PBTD 1478. Ran 69 joints 1" tubing. 1449' tubing 5' nipples 7' to der. floor
	Depth landed 1461'
	Shut in.

SAMPLE DESCRIPTION

brn—Brown
blk—Black
g—Grey
r—Red
gr—Green
w—White