

1980' FWL, 530' FWL, Sec. 17, Twp. 30N, Rge. 15W,
San Juan County. Elevation 5370' ground level, 5378'
RKB.

8-31-61 Spudded in 11" hole.

9- 1-61 8:00 AM Drilling surface hole at 30'.

9- 4-61 11:00 AM TD 95' ground level. Set 3 joints 92' of
8-5/8" OD 24 J-55 casing at 92' with 90
sacks regular cement.

10-24-61 Moved in and rigged up rotary.

10-25-61 7:00 PM Commenced drilling out from under surface
casing.

10-26-61 7:00 AM Drilling at 1000' in 7-7/8" hole. Drilling
with water. 1 1/2" at 525'. 1 1/2" at 980'.

10-27-61 7:00 AM Drilling at 1850' in sand and shale.
Drilling with water. 3" at 1079'. 2 1/2" at
1500'.

10-28-61 7:00 AM Drilling at 2750' in sand and shale.
Drilling with water. 2 1/2" at 2187'. 2 1/2" at
2500'.

10-29-61 7:00 AM Drilling at 3200'. Drilling with water.
2 1/2" at 2970'.

10-30-61 7:00 AM Drilling at 3620'. Vis. 33, wt. 8.7, ML 12.
2 1/2" at 3527'.

10-31-61 7:00 AM Drilling at 3993'. Vis. 42, wt. 9.4, ML 10.
1" at 3885'.

2 9:30 PM TD 4070'. Went in hole with core barrel.

11- 1-61 12:30 AM Cored to 4073'. Lost circulation.

3:30 AM Regained circulation. Vis. 45, wt. 9.0.
1 1/2" at 4070'.

2:30 PM Pulled Core #1 from 4070' to 4091'.
Recovered 21'. Core description attached.

10:00 PM Back on bottom with core barrel.

11- 2-61 1:00 PM Pulled Core #2 from 4091' to 4116'.
Recovered 23½'. Core description attached.

8:30 PM Back on bottom with core barrel.
Vis. 47, wt. 8.6.

11- 3-61 10:00 AM Pulled Core #3 from 4116' to 4146'.
Recovered 31½' (1½' from Core #2). Core
description attached.

6:30 PM Pulled Core #4 from 4146' to 4156'.
Recovered 10'. Core description attached.

Ran ES Induction Log to 4146'. Drilled
4156' to 4270'.

11- 4-61 Ran ES Induction and Sonic Logs.

11- 5-61 5:50 AM TD 4270' RKB. Set 132 joints 4270' of 4½"
OD 10.5# J-55 casing at 4269.5' with 175
sacks cement. First 100 sacks mixed 2% gel
and 1# floccle per sack. Maintained circu-
lation throughout cement job.

4:00 PM Temperature survey showed top of cement at
3570'. Pulled 50,000# on casing. Cut off
pipe. Released rotary.

11-10-61 Moving in cable tools.

11-11-61 Rigging up cable tools.

11-12-61 6:00 PM Ran 141 joints 2-3/8" tubing. Circulated
out water. Started pulling tubing. Rig
working daylight only. Loaded hole with
67 barrels oil prior to pulling tubing.

11-13-61 1:30 PM Finished pulling tubing. Ran gamma ray
correlation log and collar locator.

2:20 PM Perforated with 4 shots per foot from 4130½'
to 4140½' using 3-5/8" capsule crack jet and
3-5/8" capsule jets.

3:02 PM Pumped into formation with Halliburton HT-400
truck (1,000 HP). Maximum pressure 2400#,
broke to 2250#. Pumped 42 barrels oil in 2
minutes. Avg. injection rate 21 barrels per
minute. Avg. treating pressure 2150#.

11-13-61
(continued)

Instantaneous shut-down pressure 450#, 3-min.
SIP 400#, 8-min. SIP 400#. Total load oil
to this point 109 barrels.

11-14-61

9:45 AM Sandfraced with 58,846 gallons oil and
72,000# 20/40 sand. Mixed 1000# Adomite
Mark II with first 20,000 gallons oil.
Mixed sand as follows:
20/gal. with 4,400 gallons.
16/gal. with 25,000 gallons.
12/gal. with 20,000 gallons.
20/gal. with 10,000 gallons (gallons approxi-
mate).
Flushed with 500 gallons oil.

10:30 AM Well sanded off.

Avg. treating pressure 2000#. Max. TP at
sand-off 3000#. Avg. injection rate 34.7
BPM. Instantaneous shut-down pressure 350#.

11:10 AM CP 270#.

3:00 PM CP 410#.

11-15-61

8:00 AM CP 300#. Opened well. Pressure dropped to
zero immediately. Well did not flow back.
Total load oil to recover 1522 barrels.

1:00 PM Found top of sand at 3600'.

6:00 PM Ran 141 joints 2-3/8" tubing. Washed to
PSTD 4233'. Pulled 2 joints tubing. Well
started flowing. Shut well in.

11-16-61

8:00 AM CP 200#. Flowed back load oil as follows:

Time	Choke Size	Bbls.	Cum. Bbls.	CP	Remarks
10:00 AM	1/4"		47.21	50#	Tubing at 4163'.
10:30 AM	1/4"	17.70	64.91	70	Heading up. Choke sanding up.
11:00 AM	1/2"	3.60	68.51	65	Changed choke to 1/2".
12 Noon	1/2"	18.70	87.21	0	Tubing at 4143'.
1:00 PM	1/2"	17.40	104.61	0	
2:00 PM	1/2"	11.60	116.21	0	
3:00 PM	1/2"	8.00	124.21	0	
4:00 PM	1/2"	6.00	130.21	0	
5:00 PM	1/2"	6.70	136.91	0	Shut well in.

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11-17-61 Flowed back load oil as follows:

<u>Time</u>	<u>Choke Size</u>	<u>Bbls.</u>	<u>Cum. Bbls.</u>	<u>CP</u>	<u>Remarks</u>
8:00 AM				70#	Opened well. CP went to zero.
9:00 AM	1/2"	13.0	149.91	0	
10:00 AM	"	18.5	168.41	0	
11:00 AM	"	13.0	181.41	0	
12 Noon	3/4"	11.7	193.11	0	Changed choke.
1:00 PM	"	13.3	206.41	0	
2:00 PM	"	10.5	216.91	0	
3:00 PM	"	14.0	230.91	0	
4:00 PM	"	14.0	244.91	0	
5:00 PM	"	10.5	255.41	0	Shut well in.
<u>11-18-61</u>					
8:00 AM				0	Opened well to flow.
9:00 AM	3/4"	14.0	269.41		
10:00 AM	"	6.0	275.41		
11:00 AM		2.5	277.91		Well quit flowing. Pulled 2 joints tubing. Tubing at 4113'. Swabbed in. Swabbing & flowing.
1:00 PM					"
2:00 PM		19.31	297.22		"
3:00 PM		14.66	311.88		"
4:00 PM		11.78	323.66		"
5:00 PM		7.93	331.59		"
6:00 PM		9.91	341.50		"
<u>11-19-61</u>					
7:00 AM				0	Opened well. Slight blow on tubing. Well started flowing.
8:00 AM		19.83	361.33		
9:00 AM		4.95	366.28		Swabbing & Flowing.
10:00 AM		14.64	380.92		"
11:00 AM		14.80	395.72		"
12 Noon		9.98	405.70		"
1:00 PM		19.55	425.25		"
2:00 PM		9.60	434.85		"
3:00 PM		14.35	449.20		"
4:00 PM		14.13	463.33		Flowing.
5:00 PM		16.13	479.46		"
6:00 PM		20.03	499.51		Shut well in.

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11-20-61 6:00 AM CP zero, TP 140. Opened well. Commenced flowing.

Time	Wals.	Cum. Wals.	Remarks
8:00 AM	17.74	517.25	Flowing.
9:00 AM	20.43	537.68	"
10:00 AM	15.23	552.91	"
11:00 AM	21.19	574.10	"
12 Noon	18.30	592.40	"
1:00 PM	22.45	614.85	" 4% water.
2:00 PM	20.64	635.49	"
3:00 PM	22.93	658.42	"
4:00 PM	23.64	682.06	"

11-21-61 7:00 AM 881.06 260% on casing. 80 .4% 3 water, 20% BS. Well still flowing.

Time	Wals.	Cum. Wals.	Remarks
8:00 AM	9.04	890.10	CP 275%. 10% BS, .4% water.
9:00 AM	8.87	898.97	
10:00 AM	6.60	905.47	
11:00 AM	6.54	912.11	5.6% BS, .4% water.
12 Noon	9.04	921.15	
1:00 PM	8.38	929.53	
2:00 PM	8.12	937.65	
3:00 PM	7.83	945.48	
4:00 PM	7.62	953.10	CP 350%.
5:00 PM	7.48	960.58	

11-22-61
7:00 AM 78.07 1038.65 CP 250%.
6:00 PM 55.38 1094.03

11-23-61
4:00 PM 52.96 1146.99 CP 360%.
est. 75.00 Est. 75 barrels on ground after flow line to tank broke.

11-24-61
7:00 AM 50.00 1271.99 CP 300%.
4:00 PM 33.69 1,305.68 Shutted and flowed.

11-25-61
10:00 AM Well flowed 45 barrels overnight. CP 325%.
5:00 PM Shutted 33.69 barrels. Load oil to be recovered 138 barrels.

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11-26-61	8:00 AM	Flowed 11.77 barrels overnight.		
	5:00 PM	Swabbed 47.80 barrels. Load oil to be recovered 78 barrels.		
11-27-61	7:00 AM	CP 275#. Well dead. Swabbed as follows:		
<u>Time</u>	<u>Wals.</u>	<u>Gum. Wals.</u>	<u>CP</u>	<u>Remarks</u>
		1443.94	275#	Commenced swabbing.
8:00 AM	9.00	1452.94	225#	
9:00 AM	8.23	1461.17		
10:00 AM	7.96	1469.13	200#	
11:00 AM	3.99	1473.03		.8% BS & W.
12 Noon	3.86	1476.89	200#	
1:00 PM	3.76	1480.65		
2:00 PM	3.71	1484.36	190#	.6% BS & W.
3:00 PM	4.15	1488.51		
4:00 PM	4.11	1492.62	175#	Shut well in.
<u>11-28-61</u>				
7:00 AM			275#.	Resumed swabbing.
8:00 AM	9.05	1501.67		.8% BS
9:00 AM	8.38	1510.05	275#	
10:00 AM	5.14	1515.19		.6% BS
11:00 AM	6.96	1522.15	225#	Recovered all load oil.
12 Noon	7.76	1529.91		.2% BS
1:00 PM	3.76	1533.67	190#	
2:00 PM	3.71	1537.38	170#	
3:00 PM	3.77	1541.15		6% BS
4:00 PM	3.42	1544.57		
5:00 PM	6.89	1551.46		Shut well in.
<u>11-29-61</u>				
7:00 AM			275#	Resumed swabbing.
8:00 AM	8.00		275#	
9:00 AM	8.70		250#	5% BS & W
10:00 AM	6.78		250#	
11:00 AM	5.31		175#	3% BS & W
12 Noon	3.30			
1:00 PM	6.36		175#	3% BS & W
2:00 PM	3.07		170#	1% BS & W
3:00 PM	4.20		160#	1% BS & W
4:00 PM	4.16		160#	
11-30-61	3:50 PM	Found top of sand at 4164'. Pulled tubing. Reran 137 joints 2-3/8" OD HUE tubing with mud anchor, seating nipple and perforated nipple, landed at 4129'.		
12- 1-61		State Potential Test: 91.2 BOPD.		

BENSON-MONTIN-GREER DRILLING CORP.

#1 HARRINGTON - CORE DESCRIPTIONS

<u>CORE #1</u>	4070' to 4091'. Cored 21', recovered 21'.
4070-71'	Black fossiliferous shale, highly fractured vertically and horizontally.
4071-72'	As above with very fine sand inclusions.
4072-73'	As above with very fine sand inclusions, very finely micaceous.
4073-74'	As above, with intense fracturing.
4074-75'	As above, with one small sharktail impression.
4075-76'	Black hard shale, fossils abundant, highly calcareous.
4076-77'	As above.
4077-78'	As above.
4078-79'	As above with vertical fractures.
4079-80'	As above with vertical fractures.
4080-81'	As above with vertical fractures.
4081-82'	As above with vertical fractures, trace of gilsonite.
4082-83'	Black hard fossiliferous calcareous shale, slight oil odor on fresh break.
4083-84'	As above.
4084-85'	As above.
4085-86'	As above.
4086-87'	As above, very slightly micaceous and very calcareous.
4087-88'	As above.
4088-89'	Hard black calcareous slightly micaceous shale, slight oil odor on fresh break.
4089-89½'	As above, tentonitic.
4089½-90'	Medium gray quartzitic very calcareous sandstone, slicken sides, heeled with calcite at approximately 30° horizontal angle, slight odor, very slightly micaceous and very calcareous.
4090-91'	Dark grey very calcareous sub-angular to sub-rounded hard quartzitic sand with thin black shale streaks, fossiliferous and very calcareous. Fresh oil bleed on fractures.

4091-92' Black very fine silty sandstone.

4092-93' As above with vertical fractures.

4093-94' Fine dark grey very silty sandstone.

4094-95' Dark grey medium fine to medium sub-rounded hard sandstone.

4095-96' As above.

4096-97' Black very fossiliferous sandy shale.

4097-98' Dark grey medium compact quartz sand.

4098-99' Very very fine black silty sand.

4099-4100' As above.

4100-01' As above.

4101-02' As above.

4102-03' As above.

4103-04' As above.

4104-05' As above.

4105-06' Hard black shale with fine grey laminated sandstone, vertical fractures.

4106-07' As above.

4107-08' As above.

4108-09' As above.

4109-10' As above.

4110-11' Very hard dark grey medium fine shaly sand, vertical fracture.

4111-12' As above.

4112-13' As above.

4113-14' As above.

4114-14½' Dark grey very hard fine compact sandstone, few thin black shale streaks.

CORE #3 4116' to 4146'. Recovered 31½' (1½' from Core #2)

4114'-15' Hard black very silty shale with fine grey sand inclusions.

4115-16 Same.

- 4117-19' Same.
- 4119-20' Same with very very fine calcareous sand streaks.
- 4120-21' Same with very very fine calcareous sand streaks.
- 4121-22' Same with medium fine blauconitic sand streaks.
- 4122-23' Same with medium fine glauconitic sand streaks.
- 4123-24' Hard very fine silty glauconitic sand, abundant black chert pebbles.
- 4124-25' Hard dark grey brown medium fine glauconitic silty sand, black chert fragments.
- 4125-26' Hard dark grey medium to fine sub-angular quartz sand, small black chert grains.
- 4126-27' Hard dark grey medium to fine sub-angular quartz sand, increase in black shale.
- 4127-28' Hard grey brown medium fine silty sand, abundant black chert fragments.
- 4128-29' Same as above with black shale streaks.
- 4129-30' Same as above.
- 4130-31' Hard very fine grey brown fine sand, black shale streaks and inclusions.
- 4131-32' Same as above.
- 4132-33' Hard medium fine angular sub-quartzitic sand, good oil staining throughout and porous.
- 4133-34' Same as above with abundant black chert grains and fragments.
- 4134-35' Hard dark grey brown medium fine sub-angular quartz sand, black chert inclusions.
- 4135-36' Same as above.
- 4136-37' Same as above.
- 4137-38' Same as above with hard thin black shale streaks.
- 4138-39' Same as above with increase in hard black shale streaks.
- 4139-40' Hard black shale with fine grey sand inclusions and hard medium rounded to sub-rounded quartz sand, black chert fragments.

- 4140-41' Hard medium fine glauconitic shaly sand and hard black shale with fine grey sand inclusions, vertical fracture.
- 4141-42' Hard dark grey very fine sandy shale with fine grey sand inclusions, abundant fossil fragments, vertical fracture.
- 4142-43' Hard dark grey very fine silty sand.
- 4143-44' Hard dark grey very fine glauconitic quartz sand.
- 4144-45' Same as above.
- 4145-46' Same as above.
- Entire core showed slight oil and gas bleed.

CORE #4

- 4146' to 4156'. Recovered 10'.
- 4146-56' Hard dark grey very fine very silty glauconitic quartz sand.
No bleed of oil or gas. No show.

NUMBER OF COPIES RECEIVED		3
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	GAS	
PRORATION OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
CERTIFICATE OF COMPLIANCE AND AUTHORIZATION
TO TRANSPORT OIL AND NATURAL GAS

FORM C-110
 (Rev. 7-60)

BT.

FILE THE ORIGINAL AND 4 COPIES WITH THE APPROPRIATE OFFICE

Company or Operator BENSON-MONTIN-GREER DRILLING CORP.				Lease HARRINGTON		Well No. 1	
Unit Letter E	Section 17	Township 30N	Range 15W	County San Juan			
Pool Undesignated				Kind of Lease (State, Fed, Fee) Federal			
If well produces oil or condensate give location of tanks			Unit Letter # E	Section 17	Township 30N	Range 15W	
Authorized transporter of oil <input checked="" type="checkbox"/> or condensate <input type="checkbox"/> LaMar Trucking				Address (give address to which approved copy of this form is to be sent) Farmington, New Mexico			
Is Gas Actually Connected? Yes _____ No _____							
Authorized transporter of casing head gas <input type="checkbox"/> or dry gas <input type="checkbox"/> None			Date Connected	Address (give address to which approved copy of this form is to be sent)			

If gas is not being sold, give reasons and also explain its present disposition:

Small volume

INLAND CORPORATION PURCHASED ALL THE ASSETS OF BOTH LaMAR TRUCKING, INC. AND INLAND CRUDE, INC. THIS PURCHASE INCLUDED N. M. S. C. PERMIT # 670 WHICH HAS BEEN TRANSFERRED TO INLAND CORPORATION.

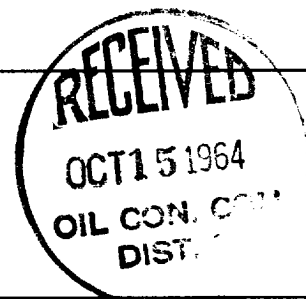
CLYDE C. LaMAR, PRESIDENT

REASON(S) FOR FILING (please check proper box)

New Well ☐
 Change in Transporter (check one)
 Oil ☒ Dry Gas ☐
 Casing head gas . ☐ Condensate.. ☐

Change in Ownership ☐
 Other (explain below)

Remarks



The undersigned certifies that the Rules and Regulations of the Oil Conservation Commission have been complied with:

Executed this the 14th day of October, 19 64

OIL CONSERVATION COMMISSION		By
Approved by Original Signed By A. R. KENDRICK		Title Vice-President
Title PETROLEUM ENGINEER DIST. NO. 3		Company Benson-Montin-Greer Drilling Corp.
Date OCT 15 1964		Address 158 Petroleum Center Building Farmington, New Mexico