

DATE IN 05/03/13	SUSPENSE	ENGINEER PG	LOGGED IN 05/06/13	TYPE IPI	APP NO. PRG 1314461170
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

[1] TYPE OF APPLICATION - Check Those Which Apply for [A]

[A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD

Check One Only for [B] or [C]

[B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM

[C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☐ SWD ☒ IPI ☐ EOR ☐ PPR

[D] Other: Specify Existing Orders - R10094/WFX-742

Caprock Maljamar Unit
 [6 wells] CMU

30-025-01525 #98

30-025-01532 #99

30-025-01538 #100

30-025-01537 #101

30-025-04193 #283

30-025-01527 #90

[2] NOTIFICATION REQUIRED TO: - Check Those Which Apply, or Does Not Apply

[A] ☐ Working, Royalty or Overriding Royalty Interest Owners

[B] ☐ Offset Operators, Leaseholders or Surface Owner

[C] ☐ Application is One Which Requires Published Legal Notice

[D] ☐ Notification and/or Concurrent Approval by BLM or SLO
 U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office

[E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,

[F] ☐ Waivers are Attached

Linn Operating

[3] SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.

[4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Terry Callahan

See Form C-103

Regulatory Comp III

05/01/2013

Print or Type Name

Signature

Title

Date

tcallahan@linenergy.com
 e-mail Address

District I - (575) 393-6161
1625 N. French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87410
District IV - (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
October 13, 2009

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well ☐ Gas Well ☒ Other Injection ☐		WELL API NO. 30-025-01525
2. Name of Operator LINN OPERATING, INC.		5. Indicate Type of Lease STATE ☒ FEE ☐
3. Address of Operator 600 TRAVIS, SUITE 5100, HOUSTON, TEXAS 77002		6. State Oil & Gas Lease No.
4. Well Location Unit Letter _____ M: 660 feet from the _____ S line and _____ 660 feet from the _____ W line Section 28 Township 17S Range 33E NMPM LEA County		7. Lease Name or Unit Agreement Name CAPROCK MALJAMAR UNIT
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 4,100' GR		8. Well Number: 098
12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data		9. OGRID Number 269324
NOTICE OF INTENTION TO: PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐ TEMPORARILY ABANDON ☐ CHANGE PLANS ☐ PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐ DOWNHOLE COMMINGLE ☐ OTHER: ☐		SUBSEQUENT REPORT OF: REMEDIAL WORK ☒ ALTERING CASING ☐ COMMENCE DRILLING OPNS. ☐ P AND A ☐ CASING/CEMENT JOB ☐ OTHER: REQUEST MAIP OF 2082 PSIA ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

LINN performed a step rate test in 400 bpd increasing increments at 30 minutes for each step. Intercept at 4,799 BWPD, 3,465.6 BH psia with a surface intercept @ 2,314 psia. Intent to increase MAIP for CMU 98 and surrounding injectors in Section 28.

Request MAIP of 2082 psia for CMU 98, 99, 100, 101, 90 and 283. All 6 wells are in Section 28 of 17S 33E. CMU 98 - 3002501525, CMU 99 - 3002501532, CMU 100 - 3002501538, CMU 101 - 3002501537, CMU 283 - 3002534193, CMU 90 - 3002501527.

Note: Cardinal Surveys Company Step Rate Test Attached

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE 

TITLE: REGULATORY COMPLIANCE III DATE MAY 1, 2013

Type or print name TERRY B. CALLAHAN
For State Use Only

E-mail address: tcallahan@linnenergy.com

PHONE: 281-840-4272

APPROVED BY: _____ TITLE _____ DATE _____
Conditions of Approval (if any):

	Location:
Location:	660 FSL & 660 FWL
Section:	M-28-175-33E
Block:	
Survey:	
County:	Lea, NM
Lat/Long:	32.8001167226342 -103.674578157504
Field:	Maljamar Grayburg San Andres
	Elevations:
GL:	4100'
KB:	4411'
KB-GL Calc:	
ck w/ Joe?	

[illegible]

Hole Size:	12-1/4"
Surf Csg:	(Ran 11 Jts) 8-5/8", 24#, J-55 STC Csg
Cement Blend:	250 sx Regular and 2% Cmc2
Returns:	
TOC:	Cmt'd to surf

Details of Perforations
4299-4315'; 4323-4343'; 4346-4362'
4299-4312' (14 holes)
4224-4337' (23 holes)
(9/28/85) Added new perfs: 4128-40' (1 JSPF - 13 holes), 4168-86' (1 JSPF - 19 holes, 4234-38' (1 JSPF - 5 holes), 4266-70' (1 JSPF - 5 holes)

(11/10/1957) 4299-4337* 20,000 Gallons lease oil & 20,000# sand
(13/18/1977) Spotted acid from 4350-4250'. Perf w/1 shot per foot: 4299-4312', 4324-4343'
4346-4348'. Treated perfs w/6000 gals of 15% acid. Swabbed 49 blw.
Frac w/20,000 gals gelled brine & 22,000# sand
(10/1/85) Treated perfs w/6000 gals. 15% NE-Fe acid, 750 SCF n2/bl, 400# rock salt, and
400# benzoic flakes in stages
(10/3/85) Treated perfs w/110 gals. Scale preventative mixed in 150 BTW.
(7/29/96) Acidized Grayburg Sand Andres 4128-4337' w/6400 gals 15% NE-Fe acid w/900#
rock salt, 600# benzoic acid flakes w/110 gals
(8/1996) RU Reef Chemical & acidized w/4000 gals. 15% anti-sludge acid w/2500# rock
salt

[illegible]

Hole Size:	7-3/4"
Prod Csg:	(Ren 137 [ts] 5-1/2", 15.5#, J-55
Capacity (bbl/ft):	
Cement Blend:	200 sxs Incor + 300 gal cealment
Returns:	
Displacement:	
Preflush:	
Depth	
TOC	
Lead Cement Blend:	
Tail Cement Blend:	

Step Rate Test



Cardinal Surveys Company

26-Apr-13

Linn Energy LLC

Well: CMU No. 98

Field;

County: Lee County, New Mexico

SC60200

File No. 20787

Intercept @ 4,799.3 BPD, 3,465.6 PSIA BHP & 2,314 PSIA Surface Intercept

Downhole PSI Tool Ser. No. CSC2601

Surface PSI Gauge Ser. No. CSC 2701

Tool @ 4400'

	Start	End	Rate
1	8:50 AM	9:45 AM	0 4400'
2	9:45 AM	10:15 AM	100
3	10:15 AM	10:45 AM	200 Replaced Pump Truck @ 10:22
4	10:45 AM	11:15 AM	0
5	11:15 AM	11:45 AM	300
6	11:45 AM	12:15 PM	500
7	12:15 PM	12:45 PM	700
8	12:45 PM	1:15 PM	900
9	1:15 PM	1:45 PM	1100
10	1:45 PM	2:15 PM	1500
11	2:15 PM	2:45 PM	1900
12	2:45 PM	3:15 PM	2300
13	3:15 PM	3:45 PM	2700
14	3:45 PM	4:15 PM	3100
15	4:15 PM	4:45 PM	3500
16	4:45 PM	5:15 PM	3900
17	5:15 PM	5:45 PM	4300
18	5:45 PM	6:15 PM	4700

Cardinal Surveys Company

26-Apr-13

Linn Energy LLC

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SC60200

File No. 20787

Intercept @ 4,799.3 BPD, 3,465.6 PSIA BHP & 2,314 PSIA Surface Intercept

Downhole PSI Tool Ser. No. CSC2601

Surface PSI Gauge Ser. No. CSC 2701

Tool @ 4400'

	Start	End	Rate
1	6:15 PM	6:45 PM	5100
2	6:45 PM	7:15 PM	5500
3	7:15 PM	7:45 PM	5900
4	7:45 PM	8:15 PM	6300
5	8:15 PM	8:20 PM	6700 Ran out of Water @ 8:20 PM
6	8:20 PM	8:36 PM	0 15 Minute Fall-Off
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			

Step Rate Test
26-Apr-13

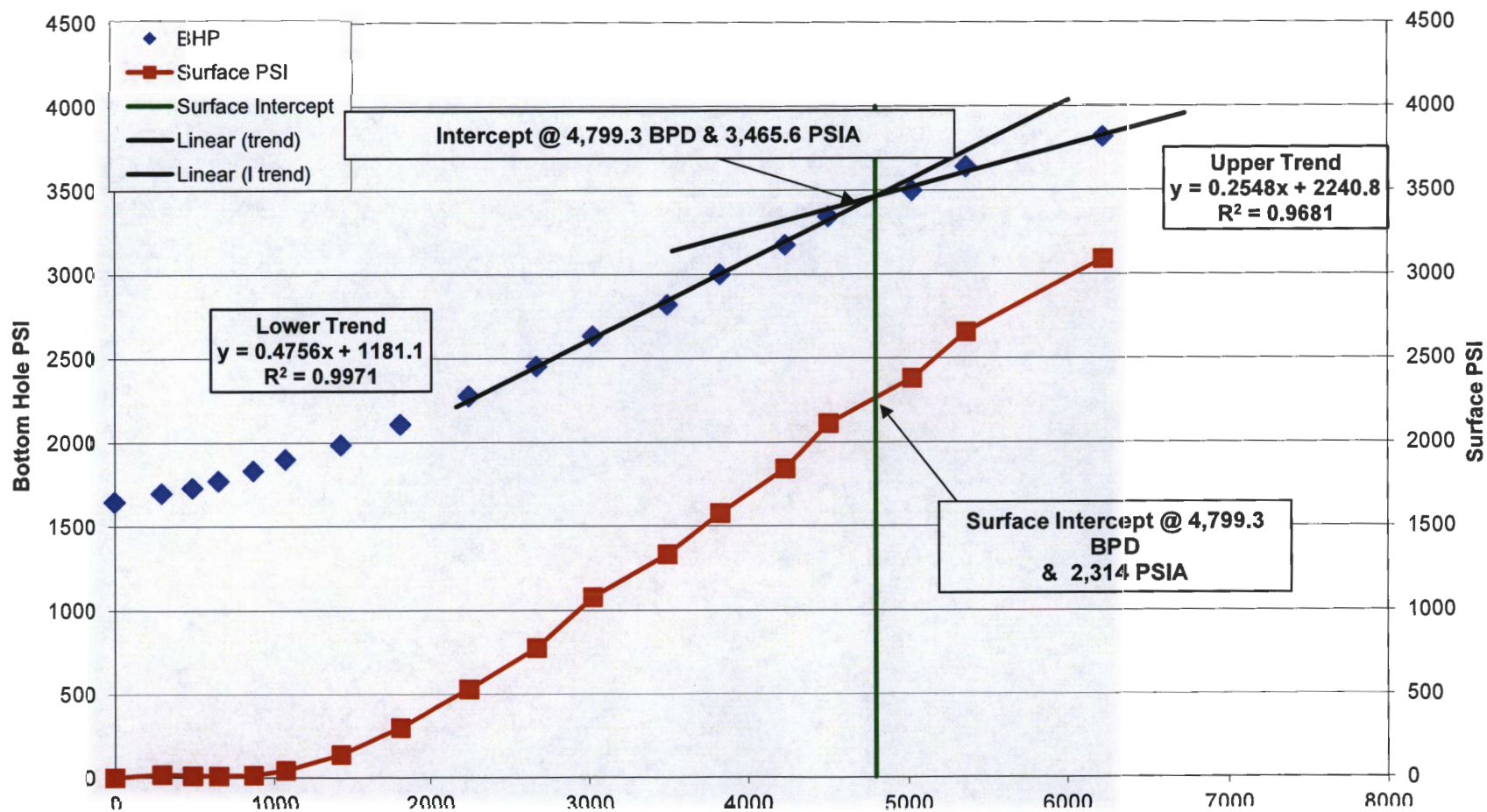
Linn Energy LLC
Well: CMU No. 98
Field:
Location: Lee County, New Mexico



upper trend 0.4756 1181.1
lower trend 0.2548 2240.8
intersect 4799.36594 BPD
BHP PSI 3463.67844 PSIA

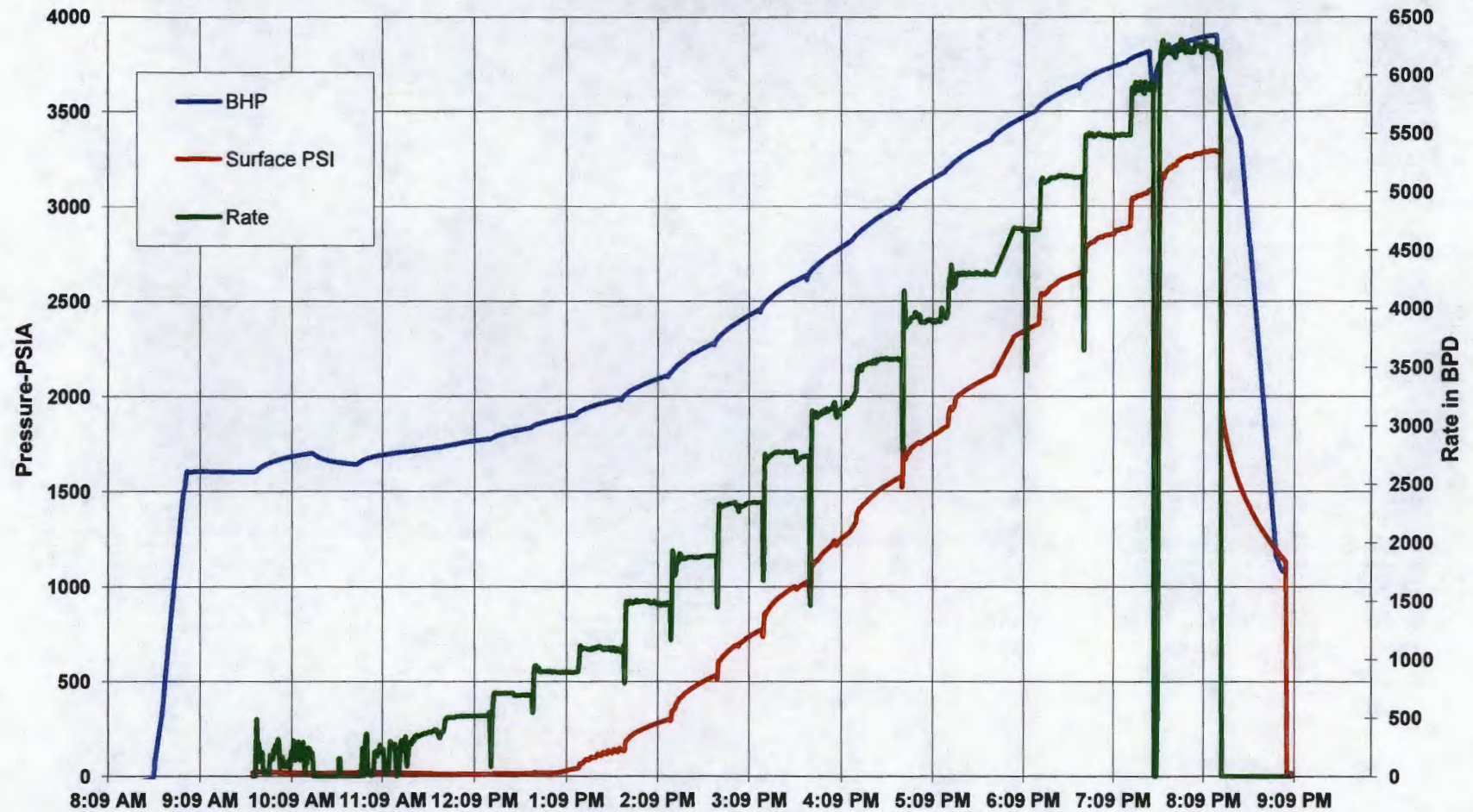
	S Time	E Time	D Time Min	Last Rate BPD	Step BPD	BHP PSIA	Surf PSIA	Cum BBL	Delta BBL	Avg. BPD	Lower Trend	Upper Trend
1	8:50 AM	9:45 AM	55	0	0	1602.9	0	0	0	0		
2	9:45 AM	10:15 AM	30	100	100	1692.8	17	4.11	4.11	197		
3	9:45 AM	10:15 AM	Replaced Pump Truck			1700.9	16	4.8	0.69	33		
4	10:15 AM	10:45 AM	30	0	0	1647.3	0	0	0	0		
5	10:45 AM	11:15 AM	30	300	300	1698.8	18.3	6.1	6.1	293		
6	11:15 AM	11:45 AM	30	500	200	1731.1	11.5	16.2	10.1	485		
7	11:45 AM	12:15 PM	30	700	200	1771.8	10.5	23.6	13.5	648		
8	12:15 PM	12:45 PM	30	900	200	1832.3	13.9	31.6	18.1	869		
9	12:45 PM	1:15 PM	30	1100	200	1901.7	41.9	40.5	22.4	1075		
10	1:15 PM	1:45 PM	30	1500	400	1985.9	137.7	52.2	29.8	1430		
11	1:45 PM	2:15 PM	30	1900	400	2107.6	299.2	67.5	37.7	1810		
12	2:15 PM	2:45 PM	30	2300	400	2276.4	530.2	84.5	46.8	2246		
13	2:45 PM	3:15 PM	30	2700	400	2453.6	775.9	102.4	55.6	2669	2453.6	
14	3:15 PM	3:45 PM	30	3100	400	2634.1	1078.5	118.6	63	3024	2634.1	
15	3:45 PM	4:15 PM	30	3500	400	2819.9	1331.6	135.8	72.8	3494	2819.9	
16	4:15 PM	4:45 PM	30	3900	400	3001.4	1576.7	152.5	79.7	3826	3001.4	
17	4:45 PM	5:15 PM	30	4300	400	3176.1	1841.4	167.89	88.19	4233	3176.1	
18	5:15 PM	5:45 PM	30	4700	400	3345.1	2110.6	181.99	93.8	4502	3345.1	
19	5:45 PM	6:15 PM	30	5100	400	3498.4	2379.2	198.5	104.7	5026		3498.4
20	6:15 PM	6:45 PM	30	5500	400	3640.2	2654.9	216.5	111.8	5366		3640.2
21	6:45 PM	7:15 PM	30	5900	400	3757.2	2891.7	220.6	108.8			
22	7:15 PM	7:45 PM	30	6300	400	3818	3091	238.5	129.7	6226		3818
23	7:45 PM	8:15 PM	30	6700	400	3905.2	3287.2	151.1	21.4	1027	Out of Water	
24	8:15 PM	8:20 PM	5	0	0	2371	1480.7	151.1	0	0	@ 8:20 PM	

Linn Energy LLC
CMU No. 98
Step Rate Test 26-Apr-13





Linn Energy LLC
CMU No. 98
Total Data Chart 26-Apr-13



R 32 E

R 33 E

Caprock Maljamar Unit The Wiser Oil Company

- New CMU Water Injection Well
- Existing Water Injection Well
- Producing Oil Well
- ✱ Producing Gas Well
- ✱ Producing Oil & Gas Well
- ◇ Plugged and Abandoned Well
- Temporarily Abandoned Well

T 17 S

T 17 S

IPI-149
CMU #93
2930 psig

IPI-149 CMU #91
2930 psig

IPI-149 CMU #94
2930 psig

R 33 E



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON

Governor

Jennifer A. Salisbury

Cabinet Secretary

Lori Wrotenbery

Director

Oil Conservation Division

March 5, 2001

ADMINISTRATIVE ORDER IPI-149-0

WISER OIL CO (THE)
8115 PRESTON RD
STE 400
DALLAS, TX 75225-

Attention: Matt Eagleston

RE: Injection Pressure Increase

You are therefore authorized to increase the surface injection pressure on the following wells:

API Well No	Well Name and Number	ULSTR	Authorized Pressure (PSIG)
30-025-32044-00-00	CAPROCK MALJAMAR UNIT - 20	H-20-17S-33E	2970
30-025-01450-00-00	CAPROCK MALJAMAR UNIT - 30	N-17-17S-33E	2970
30-025-00666-00-00	CAPROCK MALJAMAR UNIT - 48	G-24-17S-32E	3090
30-025-00662-00-00	CAPROCK MALJAMAR UNIT - 49	H-24-17S-32E	3090
30-025-01479-00-00	CAPROCK MALJAMAR UNIT - 39	B-19-17S-33E	2980
30-025-01480-00-00	CAPROCK MALJAMAR UNIT - 52	G-19-17S-33E	2980
30-025-01499-00-00	CAPROCK MALJAMAR UNIT - 42	C-20-17S-33E	2855
30-025-01500-00-00	CAPROCK MALJAMAR UNIT - 55	F-20-17S-33E	2855
30-025-01490-00-00	CAPROCK MALJAMAR UNIT - 70	J-20-17S-33E	2675
30-025-01492-00-00	CAPROCK MALJAMAR UNIT - 71	I-20-17S-33E	2675
30-025-01504-00-00	CAPROCK MALJAMAR UNIT - 44	A-20-17S-33E	2965
30-025-01511-00-00	CAPROCK MALJAMAR UNIT - 45	D-21-17S-33E	2965
30-025-01530-00-00	CAPROCK MALJAMAR UNIT - 91	F-28-17S-33E	2930✓
30-025-01531-00-00	CAPROCK MALJAMAR UNIT - 94	K-28-17S-33E	2930✓
30-025-01475-00-00	CAPROCK MALJAMAR UNIT - 80	P-19-17S-33E	3240
30-025-00664-00-00	CAPROCK MALJAMAR UNIT - 36	A-24-17S-32E	3090
30-025-01455-00-00	CAPROCK MALJAMAR UNIT - 19	L-17-17S-33E	2970
30-025-01485-00-00	CAPROCK MALJAMAR UNIT - 38	C-19-17S-33E	2980
30-025-01505-00-00	CAPROCK MALJAMAR UNIT - 54	E-20-17S-33E	2855
30-025-01506-00-00	CAPROCK MALJAMAR UNIT - 56	G-20-17S-33E	2675
30-025-01509-00-00	CAPROCK MALJAMAR UNIT - 58	E-21-17S-33E	2965
30-025-01526-00-00	CAPROCK MALJAMAR UNIT - 93	L-28-17S-33E	2930✓

Administrative Order IPI-149-0

WISER OIL CO (THE)

March 5, 2001

Page 2

30-025-33621-00-00

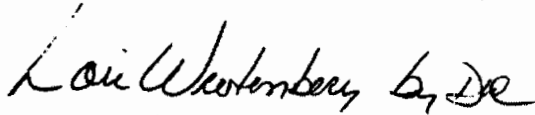
CAPROCK MALJAMAR UNIT - 263

M-20-17S-33E

3240

The Division Director may rescind these injection pressure increases if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in cursive script, appearing to read "Lori Wrotenbery".

Lori Wrotenbery,
Director

LW/DRC

cc: Oil Conservation Division - Hobbs

Case File 10932, WFX-666, WFX-696, WFX-698, WFX-694