

DATE 12/5/12	SUSPENSE	ENGINEER WVSJ	LOGGED IN 12/5	PI 426	APPROVAL PWD 1234869297
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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



OCD

2012 DEC -5 P 1:28

EDDY HUMBLE 4 STATE #1 SWD

Order: SWD-1345

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 _____

[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

[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.

Mike Pippin	<i>Mike Pippin</i>	Petroleum Engineer	December 4, 2012
Print or Type Name	Signature	Title	Date
		mike@pippinllc.com	
		e-mail Address	

LRE OPERATING, LLC
Mike Pippin
3104 N. Sullivan Avenue
Farmington, NM 87401
505-327-4573 (phone) mike@pippinllc.com

December 4, 2012

Terry G. Warnell
Engineer
Oil Conservation Division
New Mexico Department of Energy,
Minerals and Natural Resources
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: Injection Pressure Increase Request

Administrative Order SWD-1345

EDDY HUMBLE 4 STATE #1 SWD API#: 30-015-40553

Unit Letter "J" Section 4 T18S R28E

Eddy County, New Mexico

Dear Mr. Warnell:

By administrative order SWD-1345, dated July 25, 2012, the NMOCD authorized water injection into Eddy Humble 4 State #1 SWD (API No. 30-015-40553) for the disposal of produced water. The order provides for a wellhead injection pressure of no more than 1341 psi. LRE Operating, LLC believes that this maximum pressure of 1341 psi is significantly below the formation frac pressure.

On 11/30/12, a step rate test was run to determine the actual formation frac pressure. The attached bottom hole pressure curve versus rate shows a change in slope at 4893 psi (1968 psi surface), which indicates that the formation frac pressure was exceeded at that point. Therefore, the actual formation frac pressure is 4893 psi at bottom hole and 1968 psi at the surface.

LRE Operating, LLC therefore requests that the maximum wellhead injection pressure be increased to at least 1968 psi. A summary of the step rate test data is attached along with other supporting data.

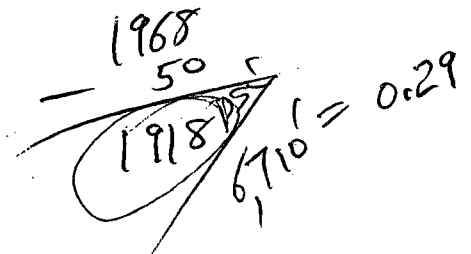
Please contact me at 505-327-4573 should you have any questions.

Very truly yours,



Mike Pippin P.E.
Petroleum Engineer

Enclosures



1968
50
1918
6710 = 0.29

EDDY HUMBLE 4 STATE #1 SWD

Current

Today's Date: 12/4/12
Mike Pippin

SWD, Abo/Wolfcamp/Cisco (97967)

(J) Section 4, T-18-S, R-28-E, Eddy County, NM

Spud: 8/23/12

Completed SWD: 11/2/12

API#: 30-015-40553

Yates @ 559'

7 Rivers @ 860'

Queen @ 1489'

San Andres @ 2342'

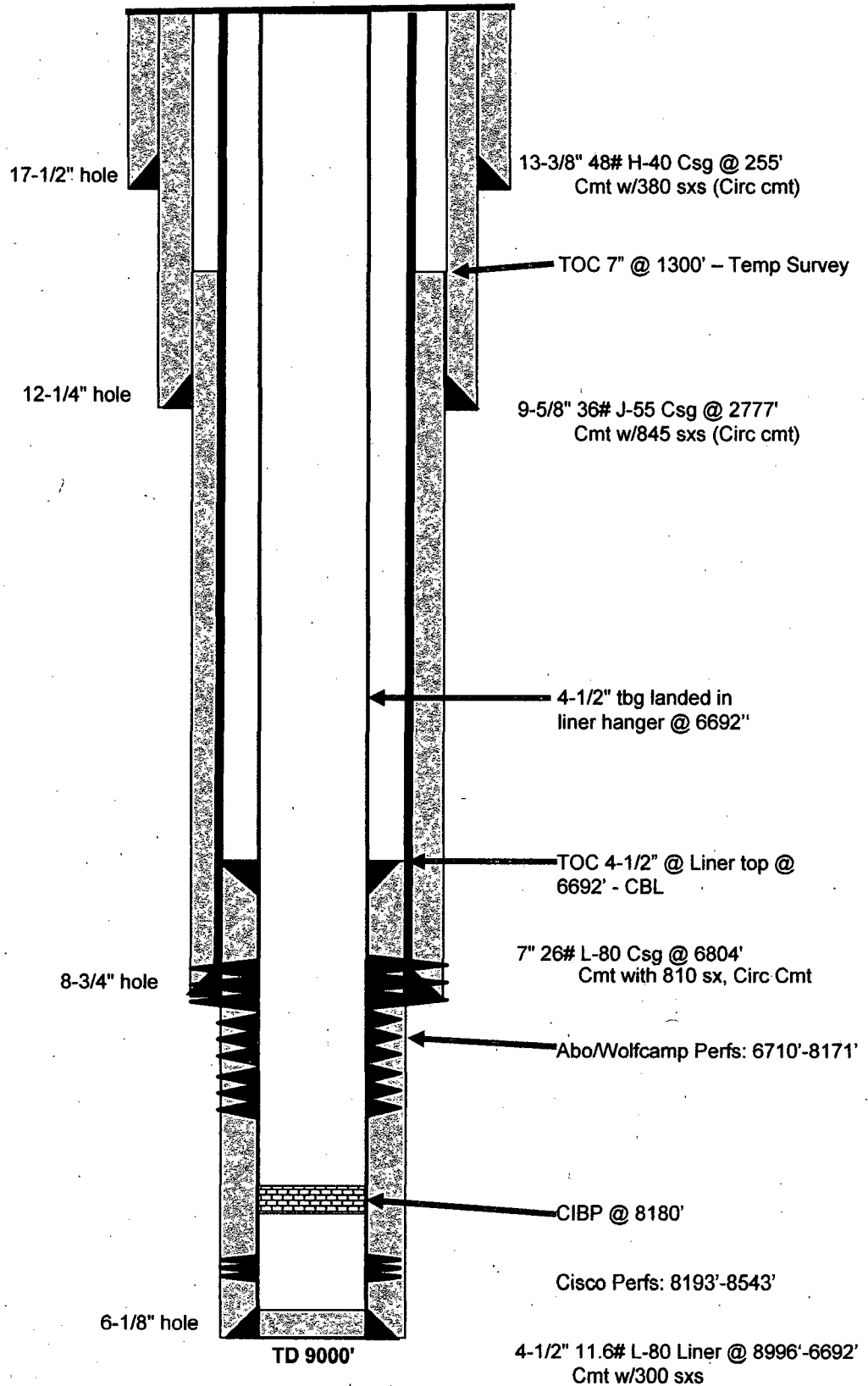
Glorieta @ 3979'

Yeso @ 4084'

Abo @ 5668'

Wolfcamp @ 6907'

Cisco @ 8155'



Step Rate Test



Cardinal Surveys Company

November 30, 2012

Lime Rock Resources
Eddy Humble "4" SWD # 1

Eddy County, New Mexico
File # 21049
Tool # CSC101

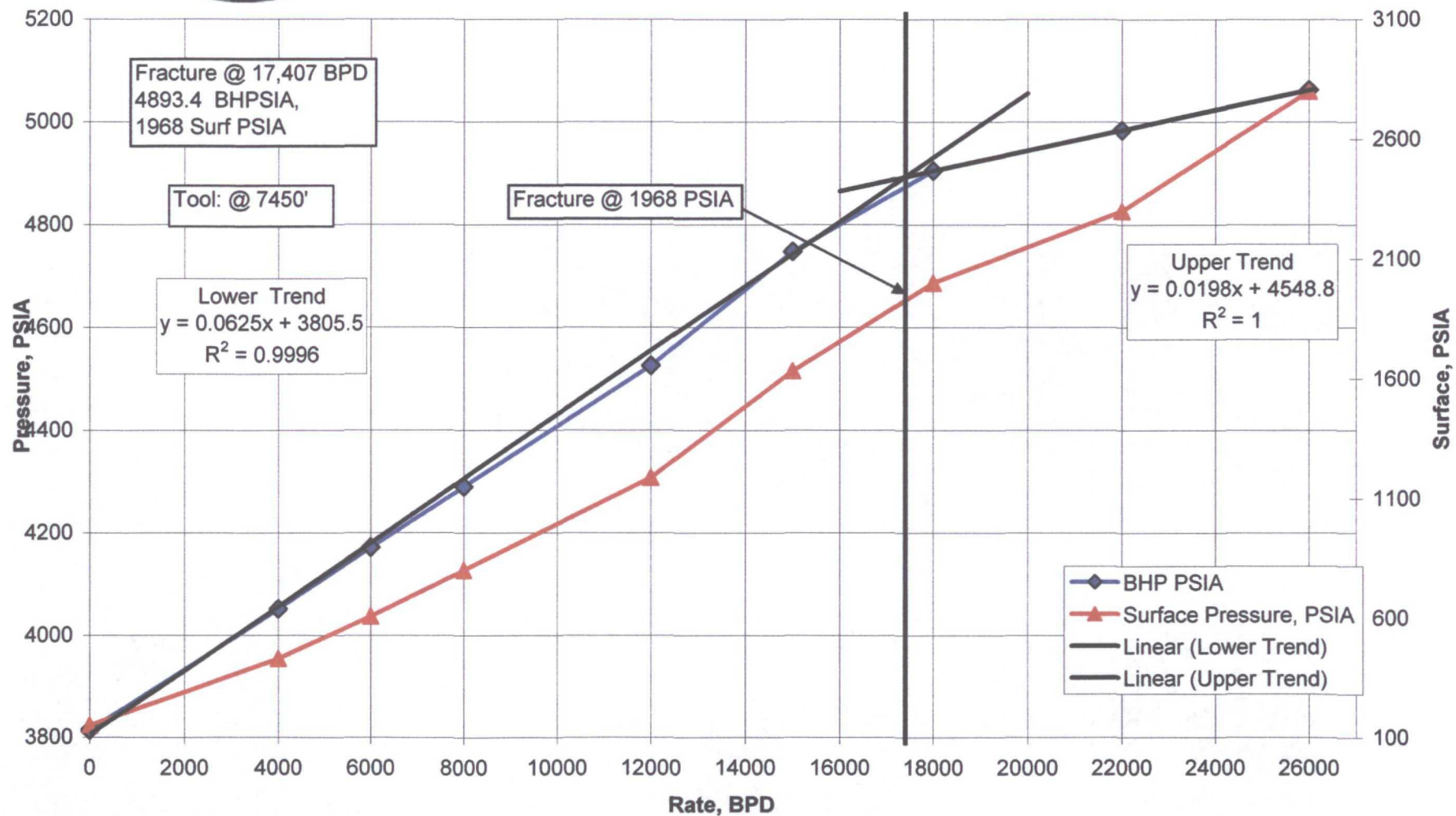
Fracture @ 17,407 BPD
4893.4 BHPSIA,
1968 Surf PSIA

Downhole PSI Tool Ser. No.
Surface PSI Gauge Ser. No.
Tool @ 7450'

	Start Time	End Time	Rate BPD	Comments
1	11:31 AM	11:45 AM		0 On Bottom
2	11:45 AM	12:15 PM	4000	
3	12:15 PM	12:45 PM	2000	
4	12:45 PM	1:15 PM	2000	
5	1:15 PM	1:45 PM	4000	
6	1:45 PM	2:15 PM	3000	
7	2:15 PM	2:45 PM	3000	
8	2:45 PM	3:15 PM	4000	
9	3:15 PM	3:45 PM	4000	
10	3:45 PM	4:00 PM	-26000	Fall Off

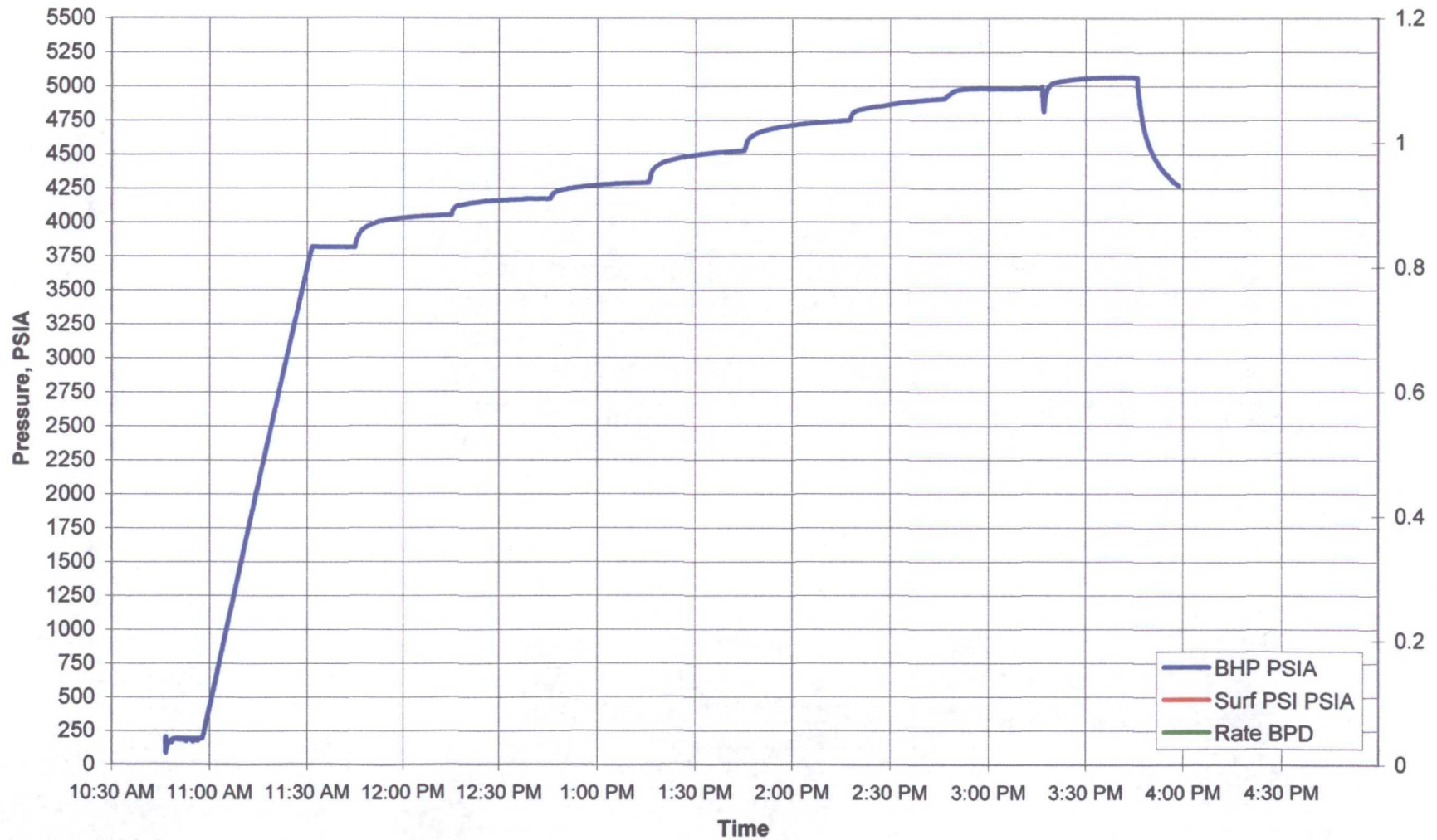


Lime Rock Resources Eddy Humble "4" SWD # 1
Step Rate Test 11-30-2012





Lime Rock Resources Eddy Humble "4" SWD # 1
Step Rate Test 11-30-2012



Step Rate Test

Lime Rock Resources
Eddy Humble "4" SWD # 1

Eddy County , New Mexico



	S Time	E Time	D Time Min	Last Rate BPD	Step B. H. Pressure BPD PSIA	Surf PSIA	Cum BBL	Delta BBL	Avg. BPD	Lower Trend	Upper Trend
1	11:31 AM	11:45 AM	14	0	0 3813.9	150	0	0.00	0	3813.9	
2	11:45 AM	12:15 PM	30	4000	4000 4051.2	430	85	85.00	4080	4051.2	
3	12:15 PM	12:45 PM	30	6000	2000 4172	609	216	131.00	6288	4172	
4	12:45 PM	1:15 PM	30	8000	2000 4289.5	800	380	164.00	7872		
5	1:15 PM	1:45 PM	30	12000	4000 4526.1	1188	617	237.00	3504		
6	1:45 PM	2:15 PM	30	15000	3000 4748.2	1634	762	145.00	-4416	4748.2	
7	2:15 PM	2:45 PM	30	18000	3000 4904.8	2000	1305	543.00	26064		4904.8
8	2:45 PM	3:15 PM	30	22000	4000 4983.6	2300	1754	449.00	21552		4983.6
9	3:15 PM	3:45 PM	30	26000	4000 5063	2800	2279	525.00	25200		5063
10	3:45 PM	4:00 PM	15	0	-26000 4268.8	572	2279	0.00	0		

0.0625 3805.5
0.0198 4548.8

int point: 17407.494 BPD
4893.4684 Psia

Submit 3 Copies To Appropriate District Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
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
June 19, 2008

RECEIVED NOV 08 2012 OCD ARTESIA		WELL API NO. 30-015-40553
		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/> State Oil & Gas Lease No.
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.)		7. Lease Name or Unit Agreement Name EDDY-HUMBLE 4 STATE
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other SWD-1345		8. Well Number #1 SWD
2. Name of Operator LRE OPERATING, LLC		9. OGRID Number 281994
3. Address of Operator c/o Mike Pippin LLC, 3104 N. Sullivan, Farmington, NM 87401		10. Pool name or Wildcat SWD, Abo/Wolfcamp/Cisco (97967)
4. Well Location Unit Letter J : 2310 feet from the SOUTH line and 1650 feet from the EAST line Section 4 Township 18-S Range 28-E NMPM Eddy County		
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3665' GL		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: SWD COMPLETION <input checked="" type="checkbox"/>	

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

On 10/18/12, ran CBL, which indicated TOC @ 6692'. Perfed Cisco @ 8193'-8293', 8311'-65', 8381'-8503', 8505'-43' w/69-0.37" spf. Dump bailed acid onto perfs. Set 4-1/2" CIBP @ 8180'. Perfed Wolfcamp @ 7779'-7815' w/13 holes, 7818'-54' w/13 holes. 7857'-93' w/13 holes. 7914'-98' w/18 holes, 8004'-8114' w/21 holes, 8122'-71' w/17 holes. Total 95 holes. On 10/22/12, treated perfs w/4900 gal 15% HCL acid & 160 perf balls. Set 4-1/2" CBP @ 7634'. Perfed Wolfcamp @ 7324'-52' w/7 holes, 7358'-7405', w/8 holes, 7410'-45' w/8 holes, 7450'-85' w/8 holes, 7490'-7510' w/5 holes, 7520'-50' w/7 holes, 7571'-7607' w/10 holes. Total 53 holes. Dump bailed 14 gal 15% HCL acid @ 7550' & 7485'. On 10/24/12, treated perfs w/3500 gal acid & 90 perf balls. Set CBP @ 7300'. Perfed Abo/Wolfcamp @ 6805'-40' w/8 holes, 6845'-80' w/8 holes, 6885'-6920' w/8 holes, 6925'-60' w/8 holes, 6965'-7000' w/8 holes, 7010'-45', w/8 holes, 7050'-7220' w/19 holes, 7225'-60' w/7 holes. Total 74 holes. Set 4-1/2" pkr @ 6750' on 3-1/2" 9.3# L-30 workover string & treated perfs w/7000 gal 15% HCL acid. Spotted 300 gal 15% HCL across perfs. Set pkr @ 6735' & treated perfs w/3500 gal acid & 125 perf balls. TOH w/tbg & pkr. On 10/29/12, perfed Abo @ 6710'-30' w/6 holes, 6734'-50' w/5 holes, 6754'-74' w/6 holes, & 6778'-94' w/5 holes. Total 22 holes. Drilled out CBPs @ 7300' & 7634'. CO to CIBP @ 8180'. On 11/1/12, ran seal assembly on 4-1/2" 11.6# L-80 duolined csg to 4-1/2" liner top @ 6692'. Circ 125 bbls pkr fluid into annulus. Landed seal assembly in liner hanger & PT annulus to 500 psi for 35 min-OK. Ran MIT test on 11/1/12. Released rig on 11/2/12. Initiated SWD on 11/3/12 as per order SWD-1345.

Spud Date: **8/23/12** Drilling Rig Release Date: **10/5/12**

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

SIGNATURE Mike Pippin TITLE Petroleum Engineer - Agent DATE 11/5/12

Type or print name Mike Pippin E-mail address: mike@pippinllc.com PHONE: 505-327-4573

For State Use Only

APPROVED BY: Ruthann / NAE TITLE Compliance Officer DATE 11/8/12
Conditions of Approval (if any):

Submit To Appropriate District Office Two Copies District I 1625 N. French Dr., Hobbs, NM 88240 District II 1301 W. Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Rd., Aztec, NM 87410 District IV 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-105 July 17, 2008				
								1. WELL API NO. 30-015-40553		
								2. Type of Lease <input checked="" type="checkbox"/> STATE <input type="checkbox"/> FEE <input type="checkbox"/> FED/INDIAN		
								3. State Oil & Gas Lease No.		
WELL COMPLETION OR RECOMPLETION REPORT AND LOG										
4. Reason for filing: <input checked="" type="checkbox"/> COMPLETION REPORT (Fill in boxes #1 through #31 for State and Fee wells only) <input type="checkbox"/> C-144 CLOSURE ATTACHMENT (Fill in boxes #1 through #9, #15 Date Rig Released and #32 and/or #33; attach this and the plat to the C-144 closure report in accordance with 19.15.17 13.K NMAC)								5. Lease Name or Unit Agreement Name EDDY HUMBLE 4 STATE		
								6. Well Number: #1 SWD		
7. Type of Completion: <input checked="" type="checkbox"/> NEW WELL <input type="checkbox"/> WORKOVER <input type="checkbox"/> DEEPENING <input type="checkbox"/> PLUGBACK <input type="checkbox"/> DIFFERENT RESERVOIR <input checked="" type="checkbox"/> OTHER SWD								<div style="border: 2px solid black; padding: 5px; display: inline-block;"> RECEIVED NOV 06 2012 NMOC D ARTESIA </div>		
8. Name of Operator: LRE OPERATING, LLC										
9. OGRID: 281994										
10. Address of Operator: c/o Mike Pippin LLC, 3104 N. Sullivan, Farmington, NM 87401								11. Pool name or Wildcat: SWD, Abo/Wolfcamp/Cisco (97967)		
12. Location	Unit Ltr	Section	Township	Range	Lot	Feet from the	N/S Line	Feet from the	E/W Line	County
Surface:	J	4	18-S	28-E		2310	South	1650	East	Eddy
BH:										
13. Date Spudded 8/23/12	14. Date T.D Reached 9/28/12	15. Date Drilling Rig Released 10/5/12		16. Date Completed (Ready to Produce) 11/2/12		17. Elevations (DF and RKB, RT, GR, etc.): 3665' GR				
18. Total Measured Depth of Well 9000'		19. Plug Back Measured Depth CIBP @ 8180'		20. Was Directional Survey Made? Yes		21. Type Electric and Other Logs Run Induction, Density/Neutron				
22. Producing Interval(s), of this completion - Top, Bottom, Name 6710'-8171'-SWD, Abo/Wolfcamp/Cisco								SWD-1345		
CASING RECORD (Report all strings set in well)										
CASING SIZE		WEIGHT LB./FT.		DEPTH SET		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED
13-3/8"		48# H-40		255'		17-1/2"		380 sx C		0'
9-5/8"		36# J-55		2777'		12-1/4"		845 sx CI C		0'
7"		26# L-80		6,804'		8-3/4"		810 sx H		0'
4-1/2"		11.6# L-80		6692'-8996'		6-1/8"		300 sx "H"		0'
24. LINER RECORD						25. TUBING RECORD				
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN		SIZE	DEPTH SET	PACKER SET		
4-1/2"	6692'	8996'	300			4-1/2"	6692'			
26. Perforation record (interval, size, and number) 6710'-6794', 22 holes 6805'-7260', 74 holes 7324'-7607, 53 holes 7779'-8171', 95 holes 8193'-8543', 69 holes, (Below CIBP @ 8180')						27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.				
						DEPTH INTERVAL		AMOUNT AND KIND MATERIAL USED		
						6710'-6794'		No Treatment		
						6805'-7260'		10,800 gal 15% HCL		
						7324'-7607'		3500 gal acid		
						7779'-8171'		4900 gal 15% HCL		
						8193'-8543'		Dump ~56 gal 15% HCL (Below CIBP @ 8180')		
28. PRODUCTION										
Date First Production Start SWD on 11/3/12		Production Method (Flowing, gas lift, pumping - Size and type pump)					Well Status (Prod. or Shut-in) Shut in for MIT test			
Date of Test	Hours Tested 5 hrs	Choke Size	Prod'n For Test Period:	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio			
Flow Tubing Press.	Casing Pressure	Calculated 24- Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)				
29. Disposition of Gas (Sold, used for fuel, vented, etc.) SWD-1345								30. Test Witnessed By Jerry Smith		
31. List Attachments										
32. If a temporary pit was used at the well, attach a plat with the location of the temporary pit.										
33. If an on-site burial was used at the well, report the exact location of the on-site burial:										
Latitude Longitude NAD 1927 1983										
I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief										
Signature		Printed Name		Mike Pippin		Title: Petroleum Engineer		Date: 11/5/12		
E-mail Address: mike@pippinllc.com										

JPW

EDDY HUMBLE 4 STATE #1 – Drilled new SWD

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

OIL OR GAS SANDS OR ZONES

No. 4. from _____ to _____

No. 2, from.....to.....feet.....

From	To	Thickness In Feet	Lithology
			- On File -

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
June 19, 2008

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

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.)		WELL API NO. 30-015-40553
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <u>SWD-1345</u>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator LRE OPERATING, LLC		6. State Oil & Gas Lease No.
3. Address of Operator c/o Mike Pippin LLC, 3104 N. Sullivan, Farmington, NM 87401		7. Lease Name or Unit Agreement Name EDDY-HUMBLE 4 STATE
4. Well Location Unit Letter <u>J</u> : <u>2310</u> feet from the <u>SOUTH</u> line and <u>1650</u> feet from the <u>EAST</u> line Section <u>4</u> Township <u>18-S</u> Range <u>28-E</u> NMPM <u>Eddy</u> County		8. Well Number <u>#1 SWD</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) <u>3665' GL</u>		9. OGRID Number <u>281994</u>
		10. Pool name or Wildcat <u>SWD, Abo/Wolfcamp/Cisco (97967)</u>

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: <u>Added Perfs & Acidized</u> <input checked="" type="checkbox"/>	

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 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

On 11/13/12, perfed 7567'-7687' w/11 holes, 7690'-7714' w/9 holes, & 7740'-7776' w/13 holes. Treated all perfs w/21,588 gal 15% HCL acid. On 11/15/12, released all rental equipment & contractors.

Spud Date: 8/23/12

Drilling Rig Release Date: 10/5/12

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

SIGNATURE Mike Pippin TITLE Petroleum Engineer - Agent DATE 11/19/12

Type or print name Mike Pippin E-mail address: mike@pippinllc.com PHONE: 505-327-4573
For State Use Only

APPROVED BY: [Signature] TITLE State Supervisor DATE 11/21/2012
Conditions of Approval (if any):

