HOBBS OCD

OCD-HOBBS

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

JUL 01 2015

RECEIVED

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

5. Lease Serial No.
NMLC065863

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

1. Type of Well
☐ Oil Well ☐ Gas Well ☒ Other: INJECTION

8. Well Name and No.
ZIA AGI 1

2. Name of Operator
DCP MIDSTREAM, LP

Contact: DALE T LITTLEJOHN
E-Mail: dale@geolex.com

9. API Well No.
30-025-42208

3a. Address
370 17TH STREET SUITE 2500
DENVER, CO 80208-5406

3b. Phone No. (include area code)
Ph: 505-842-8000

10. Field and Pool, or Exploratory
EXPL BRUSHY/CHERRY CANYON

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 19 T19S R32E 2305FSL 950FWL

11. County or Parish, and State
LEA COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Wat
☒ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Wel
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Oth
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate dura
If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent marker
Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed withi
following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall b
testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the ope
determined that the site is ready for final inspection.)

On May 20, 2015 a step rate test (SRT) was successfully completed at the DCP Zia AGI #1 well. The BLM Carlsbad Office was notified prior to the test via the BLM Hotline and Mr. Paul Swartz was onsite to witness the testing. The NMOCD Hobbs District Office was also notified as a courtesy and elected to not observe. The five perforated zones between 5,682 and 6,260 feet below surface (measured depth ? MD) were tested. Results of the testing are attached. The BLM-provided SRT data forms have been provided for both the surface pressure measurements which were recorded by Cudd Energy Services (pages 1-3) and by Schlumberger (pages 4-6). The graph for these two sets of surface pressure measurements shows excellent agreement between both sets of data (Figure 1- Page 7). In addition, the bottom hole pressure graph from the Schlumberger downhole pressure sensor is also included (Figure 2 ? Page 7).

The calculated surface parting pressure was 1,195 psig (Cudd data) and 1,218 (Schlumberger data)

accept for record with attached order of authorized officer.

PROVIDE S.R.T. RESULTS TO SANTA FE OCD FOR APPROVAL

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #305882 verified by the BLM Well Information System
For DCP MIDSTREAM, LP, sent to the Hobbs
Committed to AFMSS for processing by ED FERNANDEZ on 06/23/2015 ()

Name *(Printed/Typed)* DALE T LITTLEJOHN — Title GEOLEX CONSULTANT TO DCP

Signature (Electronic Submission) — Date 06/19/2015

ACCEPTED FOR RECORD

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____ Title _____ Date JUN 29 2015

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon. Office

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Accepted for Record Only
NMOCD 7/1/2015

JUL 02 2015

Additional data for EC transaction #305882 that would not fit on the form

32. Additional remarks, continued

pumping at 0.23 barrels per minute using 9.3 lb/gal brine. A maximum surface pressure of 2,211 psig (Cudd data) and 2,121 psig (Schlumberger data) was observed in the eighth step at a target rate of 6 gpm (actual 6.14 bpm) with fluids filling the natural laminations in the sediments of the injection zone with no indication of vertical fracturing. Subsequent tracer testing revealed that only the three bottom zones took fluid with the lower most zone (6,162 ? 6,260 feet) taking 10 % of the flow, the next higher zone (6,030 ? 6,136 feet) taking 84% of the flow and the next upper zone (5,907 ? 6,010 feet) taking 6% of the flow. The two upper zones (5,682 ? 5,756 feet and 5,788 ? 5,890 feet) did not take any flow during the tracer survey. These tracer tests are used by EPA to confirm the lack of vertical travel of the fluid and in this case they clearly confirm the lack of vertical fracturing and lack of upward flow within the investigation zone of the tool (up to 10 feet from the bore hole). The NMOCD-approved maximum allowable operating pressure (MAOP) for treated acid gas is 2,233 psig. The anticipated pressure required to inject the 2.5 barrels per minute of treated acid gas produced by the plant is estimated to be between 1,500 and 1,600 psig.

This step rate test fulfills the requirement of the BLM Conditions of Approval for DCP Zia AGI #1 dated October 22, 2014 and NMOCC Order R-13809 and demonstrates the Zia AGI #1 well can be safely operated at pressures within the currently approved MAOP. DCP is not requesting an MAOP increase at this time for this well.

A report is attached providing all of the test data, graphs and supporting exhibits for the parting pressure calculations. Since this well is will be completed with continuous bottom hole pressure monitoring as required by the NMOCC Order (R-13809) DCP can assure that fracture pressure is never exceeded during injection operations.

STEP RATE TEST DATA for BLM

Operator: DCP Midstream (Cudd Surface Pressure) Well: Zia AGI #1 (all perforation zones)
API#: 30-025-42208 Lease: NM0149956
Date collected: 5/20/15 Sfc Loc: T-19-S, R-32-E, Sec 19 (2100 FSL & 950 FWL)
Input cell

Packer set at: 5475.00 Inj Pipe I.D.: 2.44
Top Injection Depth: **5801** X 0.20psig/ft = Expected Surface Fracture psig: **1160.2**
With Mud Wt Scale: **9.3** lbs/gal Beginning Formation psig: **2959** at Depth: **6096**
Injection fluid lbs/gal: **9.3** Hydrostatic Pressure of fluid at top depth of injection: 2816
Beginning Wellhead psig: **0** Target Maximum Rate - bpd(barrels per day): **7200**

1. Take a charted record of shut in psig for no less than 48 hours. If the shut in psig is above the expected fracture pressure, **the wellhead pressure will need to be bled off before beginning the Step Rate Test.**
2. Preform a minimum of seven steps, recording rate to ±0.1bpm and surface pressures to ±10psig in five minute intervals. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection.

4. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15psig. Record the average of those two readings as the Data Point for that Step #.

Step 1 Target gpm = 10.50 0.23 bpm pmp'd for Step 1
Target Test Rate (5% of maximum bpd/1440 = **0.2500** bpm (barrels per minute) for **Step 1**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	11:12
Surface (psig):	1233.00	1221.00	1197.00	1186.00	1167.00	1166.00	End Time:	11:42
Formation (psig)	4182.00	4167.00	4150.00	4141.00	4120.00	4120.00	**Graph Data for**	
gpm:	7.14	7.98	8.82	7.98	11.76	13.02		
Time:	35 min	40 min	45 min	50 min	25 min	60 min	**Point #1**	
Surface (psig):							Sfc psig:	1195.00
Formation (psig):							F psig:	4146.67
gpm:							gpm:	9.45

Step 1 has a target bpd rate of: 360

Step 2 Target gpm = 21.00 0.47 bpm pmp'd for Step 2
Target Test Rate (10% of maximum bpd/1440 = **0.5000** bpm for **Step 2**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	11:42
Surface (psig):	1175.00	1177.00	1181.00	1177.00	1183.00	1183.00	End Time:	12:12
Formation (psig):	4126.00	4128.00	4130.00	4132.00	4134.00	4135.00	**Graph Data for**	
gpm:	21.00	20.16	18.48	19.32	20.58	19.32		
Time:	35 min	40 min	45 min	50 min	25 min	60 min	**Point #2**	
Surface (psig):							Sfc psig:	1179.33
Formation (psig):							F psig:	4130.83
gpm:							gpm:	19.81

Step 2 has a target bpd rate of: 720

Step 3 Target gpm = 42.00 1.06 bpm pmp'd for Step 3
Target Test Rate (20% of maximum bpd/1440 = **1.0000** bpm for **Step 3**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	12:12
Surface (psig):	1198.00	1204.00	1207.00	1201.00	1209.00	1198.00	End Time:	12:42
Formation (psig):	4139.00	4142.00	4143.00	4143.00	4143.00	4143.00	**Graph Data for**	
gpm:	44.52	44.52	44.52	44.52	44.52	44.52		
Time:	35 min	40 min	45 min	50 min	25 min	60 min	**Point #3**	
Surface (psig):							Sfc psig:	1202.83
Formation (psig)							F psig:	4142.17
gpm:							gpm:	44.52

Step 3 has a target bpd rate of: 1440

STEP RATE TEST DATA for BLM

Operator: DCP Midstream (Cudd Surface Pressure) Well: Zia AGI #1 (all perforation zones)
API#: 30-025-42208 Lease: NM0149956
Date collected: 5/20/15 Sfc Loc: T-19-S, R-32-E, Sec 19 (2100 FSL & 950 FWL)

Step 4 Target gpm = 84.00 2.03 bpm pmp'd for Step 4
Target Test Rate (40% of maximum bpd/1440 = **2.0000** bpm for **Step 4**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	12:42
Surface (psig):	1315.00	1295.00	1281.00	1252.00	1240.00	1237.00	End Time:	13:12
Formation (psig):	4155.00	4119.00	4110.00	4107.00	4103.00	4100.00	**Graph Data for Point #4**	
Rate gal/min:	85.68	86.10	91.98	83.16	82.32	82.32		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1270.00
Formation (psig):							F psig:	4115.67
gpm:							gpm:	85.26

Step 4 has a target bpd rate of: 2880

Step 5 Target gpm = 126.00 3.07 bpm pmp'd for Step 5
Target Test Rate (60% of maximum bpd/1440 = **3.0000** bpm for **Step 5**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	13:12
Surface (psig):	1404.00	1409.00	1407.00	1408.00	1399.00	1401.00	End Time:	13:42
Formation (psig)	4103.00	4101.00	4100.00	4100.00	4100.00	4099.00	**Graph Data for Point #5**	
gpm:	129.36	128.10	128.94	130.20	128.10	128.52		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1404.67
Formation (psig):							F psig:	4100.50
gpm:							gpm:	128.87

Step 5 has a target bpd rate of: 4320

Step 6 Target gpm = 168.00 4.08 bpm pmp'd for Step 6
Target Test Rate (80% of maximum bpd/1440 = **4.0000** bpm for **Step 6**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	13:42
Surface (psig):	1648.00	1611.00	1610.00	1624.00	1604.00	1610.00	End Time:	14:12
Formation (psig)	4104.00	4104.00	4105.00	4105.00	4105.00	4106.00	**Graph Data for Point #6**	
Rate gal/min:	176.82	169.68	170.52	170.94	170.10	170.52		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1617.83
Formation (psig):							F psig:	4104.83
gpm:							gpm:	171.43

Step 6 has a target bpd rate of: 5760

Step 7 Target gpm = 210.00 5.03 bpm pmp'd for Step 7
Target Test Rate (100% of maximum bpd/1440 = **5.0000** bpm for **Step 7**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	14:12
Surface (psig):	1859.00	1871.00	1856.00	1865.00	1866.00	1877.00	End Time:	14:42
Formation (psig):	4109.00	4110.00	4112.00	4114.00	4115.00	4113.00	**Graph Data for Point #7**	
gpm:	208.74	211.68	212.94	212.10	210.84	211.26		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1865.67
Formation (psig):							F psig:	4112.17
gpm:							gpm:	211.26

Step 7 has a target bpd rate of:: 7200

STEP RATE TEST DATA for BLM

Operator: DCP Midstream (Cudd Surface Pressure) Well: Zia AGI #1 (all perforation zones)

API#: 30-025-42208 Lease: NM0149956

Date collected: 5/20/15 Sfc Loc: T-19-S, R-32-E, Sec 19 (2100 FSL & 950 FWL)

Step 8	Target gpm = 252.00			6.14 bpm pmp'd for Step 8				
Target Test Rate (120% of maximum bpd/1440 =				**6.0000** bpm for **Step 8**				
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	14:42
Surface (psig):	2217.00	2201.00	2210.00	2210.00	2220.00	2210.00	End Time:	15:12
Formation (psig):	4116.00	4117.00	4118.00	4120.00	4121.00	4121.00	**Graph Data for Point #8**	
Rate gal/min:	257.04	258.72	258.30	258.30	258.72	255.78		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	2211.33
Formation (psig):							F psig:	4118.83
gpm:							gpm:	257.81

Step 8 has a target bpd rate of: 8640

STEP RATE TEST DATA for BLM

Operator: DCP Midstream (Schlumberger Surface Press) Well: Zia AGI #1 (all perforation zones)
API#: 30-025-42208 Lease: NM0149956
Date collected: 5/20/15 Sfc Loc: T-19-S, R-32-E, Sec 19 (2100 FSL & 950 FWL)
Input cell

Packer set at: 5475.00 Inj Pipe I.D.: 2.44
Top Injection Depth: **5801** X 0.20psig/ft = Expected Surface Fracture psig: **1160.2**
With Mud Wt Scale: **9.3** lbs/gal Beginning Formation psig: **2959** at Depth: **6096**
Injection fluid lbs/gal: **9.3** Hydrostatic Pressure of fluid at top depth of injection: 2800
Beginning Wellhead psig: **17** Target Maximum Rate - bpd(barrels per day): **7200**

1. Take a charted record of shut in psig for no less than 48 hours. If the shut in psig is above the expected fracture pressure, **the wellhead pressure will need to be bled off before beginning the Step Rate Test.**
2. Preform a minimum of seven steps, recording rate to ±0.1bpm and surface pressures to ±10psig in five minute intervals. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection.

4. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15psig. Record the average of those two readings as the Data Point for that Step #.

Step 1 Target gpm = 10.50 0.23 bpm pmp'd for Step 1
Target Test Rate (5% of maximum bpd/1440 = **0.2500** bpm (barrels per minute) for **Step 1**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	11:12
Surface (psig):	1247.00	1223.00	1227.00	1219.00	1199.00	1195.00	End Time:	11:42
Formation (psig)	4182.00	4167.00	4150.00	4141.00	4120.00	4120.00	**Graph Data for**	
gpm:	7.14	7.98	8.82	7.98	11.76	13.02		
Time:	35 min	40 min	45 min	50 min	25 min	60 min	**Point #1**	
Surface (psig):							Sfc psig:	1218.33
Formation (psig):							F psig:	4146.67
gpm:							gpm:	9.45

Step 1 has a target bpd rate of: 360

Step 2 Target gpm = 21.00 0.47 bpm pmp'd for Step 2
Target Test Rate (10% of maximum bpd/1440 = **0.5000** bpm for **Step 2**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	11:42
Surface (psig):	1204.00	1209.00	1214.00	1215.00	1214.00	1214.00	End Time:	12:12
Formation (psig):	4126.00	4128.00	4130.00	4132.00	4134.00	4135.00	**Graph Data for**	
gpm:	21.00	20.16	18.48	19.32	20.58	19.32		
Time:	35 min	40 min	45 min	50 min	25 min	60 min	**Point #2**	
Surface (psig):							Sfc psig:	1211.67
Formation (psig):							F psig:	4130.83
gpm:							gpm:	19.81

Step 2 has a target bpd rate of: 720

Step 3 Target gpm = 42.00 1.06 bpm pmp'd for Step 3
Target Test Rate (20% of maximum bpd/1440 = **1.0000** bpm for **Step 3**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	12:12
Surface (psig):	1235.00	1240.00	1238.00	1240.00	1239.00	1242.00	End Time:	12:42
Formation (psig):	4139.00	4142.00	4143.00	4143.00	4143.00	4143.00	**Graph Data for**	
gpm:	44.52	44.52	44.52	44.52	44.52	44.52		
Time:	35 min	40 min	45 min	50 min	25 min	60 min	**Point #3**	
Surface (psig):							Sfc psig:	1239.00
Formation (psig)							F psig:	4142.17
gpm:							gpm:	44.52

Step 3 has a target bpd rate of: 1440

STEP RATE TEST DATA for BLM

Operator: DCP Midstream (Schlumberger Surface Press) Well: Zia AGI #1 (all perforation zones)
API#: 30-025-42208 Lease: NM0149956
Date collected: 5/20/15 Sfc Loc: T-19-S, R-32-E, Sec 19 (2100 FSL & 950 FWL)

Step 4 Target gpm = 84.00 2.03 bpm pmp'd for Step 4
Target Test Rate (40% of maximum bpd/1440 = **2.0000** bpm for **Step 4**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	12:42
Surface (psig):	1334.00	1290.00	1282.00	1282.00	1263.00	1265.00	End Time:	13:12
Formation (psig):	4155.00	4119.00	4110.00	4107.00	4103.00	4100.00	**Graph Data for Point #4**	
Rate gal/min:	85.68	86.10	91.98	83.16	82.32	82.32		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1286.00
Formation (psig):							F psig:	4115.67
gpm:							gpm:	85.26

Step 4 has a target bpd rate of: 2880

Step 5 Target gpm = 126.00 3.07 bpm pmp'd for Step 5
Target Test Rate (60% of maximum bpd/1440 = **3.0000** bpm for **Step 5**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	13:12
Surface (psig):	1424.00	1435.00	1411.00	1411.00	1412.00	1408.00	End Time:	13:42
Formation (psig)	4103.00	4101.00	4100.00	4100.00	4100.00	4099.00	**Graph Data for Point #5**	
gpm:	129.36	128.10	128.94	130.20	128.10	128.52		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1416.83
Formation (psig):							F psig:	4100.50
gpm:							gpm:	128.87

Step 5 has a target bpd rate of: 4320

Step 6 Target gpm = 168.00 4.08 bpm pmp'd for Step 6
Target Test Rate (80% of maximum bpd/1440 = **4.0000** bpm for **Step 6**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	13:42
Surface (psig):	1633.00	1594.00	1599.00	1595.00	1604.00	1585.00	End Time:	14:12
Formation (psig)	4104.00	4104.00	4105.00	4105.00	4105.00	4106.00	**Graph Data for Point #6**	
Rate gal/min:	176.82	169.68	170.52	170.94	170.10	170.52		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1601.67
Formation (psig):							F psig:	4104.83
gpm:							gpm:	171.43

Step 6 has a target bpd rate of: 5760

Step 7 Target gpm = 210.00 5.03 bpm pmp'd for Step 7
Target Test Rate (100% of maximum bpd/1440 = **5.0000** bpm for **Step 7**

Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:	14:12
Surface (psig):	1813.00	1816.00	1812.00	1815.00	1820.00	1809.00	End Time:	14:42
Formation (psig):	4109.00	4110.00	4112.00	4114.00	4115.00	4113.00	**Graph Data for Point #7**	
gpm:	208.74	211.68	212.94	212.10	210.84	211.26		
Time:	35 min	40 min	45 min	50 min	25 min	60 min		
Surface (psig):							Sfc psig:	1814.17
Formation (psig):							F psig:	4112.17
gpm:							gpm:	211.26

Step 7 has a target bpd rate of:: 7200

STEP RATE TEST DATA for BLM

Operator: DCP Midstream (Schlumberger Surface Press) Well: Zia AGI #1 (all perforation zones)
API#: 30-025-42208 Lease: NM0149956
Date collected: 5/20/15 Sfc Loc: T-19-S, R-32-E, Sec 19 (2100 FSL & 950 FWL)

Step 8	Target gpm = 252.00		6.14 bpm pmp'd for Step 8				
Target Test Rate (120% of maximum bpd/1440 =			**6.0000** bpm for **Step 8**				
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time: 14:42
Surface (psig):	2131.00	2096.00	2119.00	2122.00	2125.00	2131.00	End Time: 15:12
Formation (psig):	4116.00	4117.00	4118.00	4120.00	4121.00	4121.00	**Graph Data for Point #8**
Rate gal/min:	257.04	258.72	258.30	258.30	258.72	255.78	
Time:	35 min	40 min	45 min	50 min	25 min	60 min	
Surface (psig):							Sfc psig: 2120.67
Formation (psig):							F psig: 4118.83
gpm:							gpm: 257.81

Step 8 has a target bpd rate of: 8640

ISIP = 1106

Expected Fluid Wt = $5\frac{91}{100}$ lb/gal

Top Perf taking Fluid @ 5907' per Inj profile

Step Rate test fluid was $9\frac{3}{100}$ lb/gal

$\frac{5907'}{1} \times \frac{9\frac{3}{100}\text{ lb}}{\text{gal}} \times \frac{1\text{ gal}}{19\frac{25}{100}\text{ ft/in}^2} = 2854$ psi Hydrostatic $9\frac{3}{100}$#/gal

2854 + 1106 ISIP = 3960 psi closing frac pressure @ 5907' perf

$\frac{5907'}{1} \times \frac{5\frac{91}{100}\text{ lb}}{\text{gal}} \times \frac{1\text{ gal}}{19\frac{25}{100}\text{ ft/in}^2} = 1814$ psi Hydrostatic $5\frac{91}{100}$#/gal

3960 − 1814 = 2146 psig @ wellhead

2146 psig is somewhat less than the 2233psig approved by NMOCD Administrative Order R-13809 and is dependant on the estimated Acid Gas Fluid Weight.

Therefor after the Acid Gas Hydrostatic pressure is determined by installed pressure recorders at the wellhead and at the formation an acceptable wellhead pressure is to be recalculated and agreed on.

06/29/2015

PRL

Figure 1 Graph of Cudd Energy Services and Schlumberger Surface Pressure Data

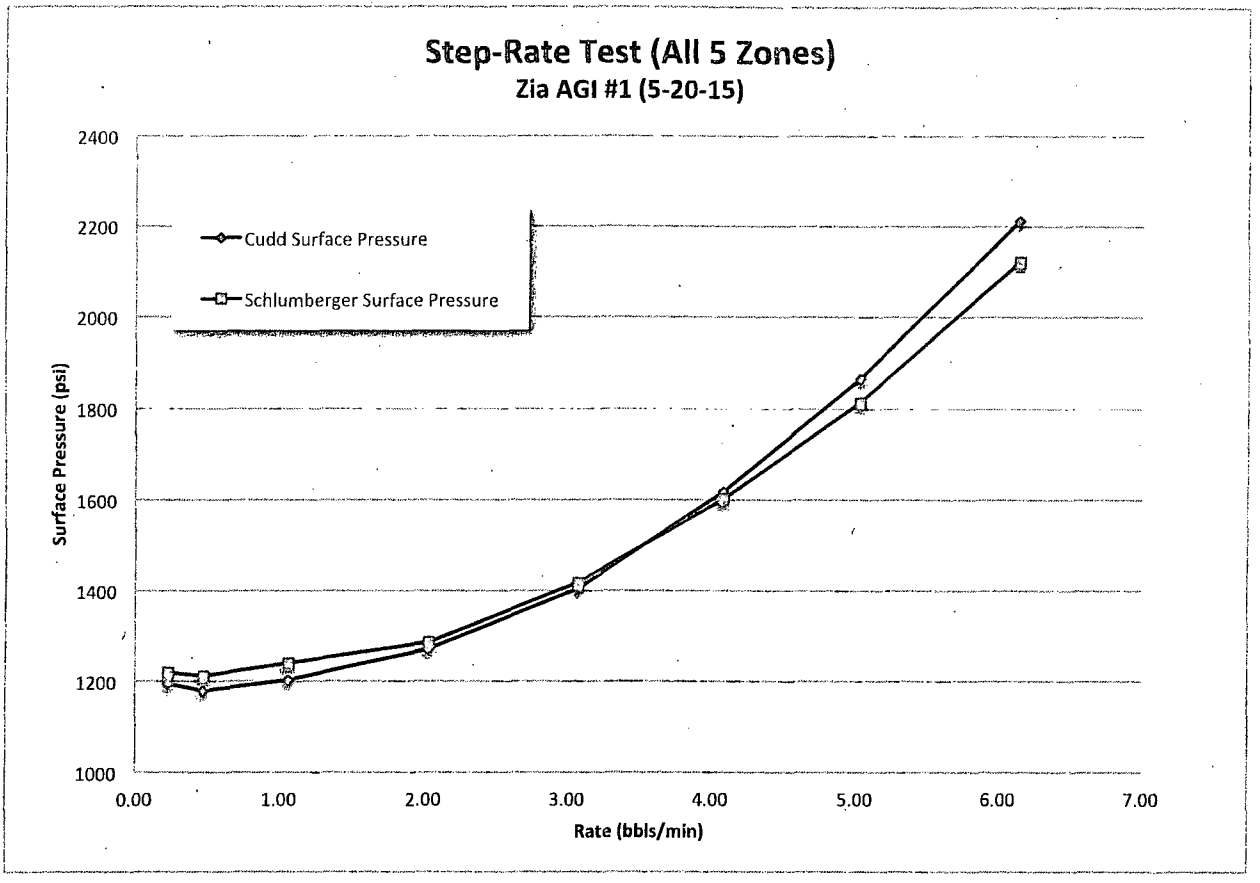

Figure 2 Graph of Schlumberger Bottom Hole Pressure Data