

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

OCT 13 2015

FORM APPROVED
OMB No. 1004-0137
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.

5. Lease Serial No.
Fee & Fed (NMSF - 081332 / 081332-B)

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 2.

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

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
Regina Com 25-2-14-15 #1H

2. Name of Operator
Anschutz Exploration Corporation

9. API Well No.
30-039-31203

3a. Address
555 17th Street, Suite 2400, Denver, CO 80202

3b. Phone No. (include area code)
(303) 298-1000

10. Field and Pool or Exploratory Area
Gavilan Mancos

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
SHL: Unit B, 1070' FNL & 2383' FEL of Section 14, T25N, R2W
BHL: Unit B, 865' FNL & 1825' FEL of Section 15, T25N, R2W

11. Country or Parish, State
Rio Arriba, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input checked="" type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other clarification and additional completion information
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

*This sundry serves to correct the bottomhole location of the above referenced well for all previously submitted reports to the following:
BHL: Unit B, 865' FNL & 1825' FEL of Section 15, T25N, R2W

In addition, Anschutz would like to provide the attached Form 3160-4 accepted by the BLM on 6/23/15 as an exhibit to this sundry to provide the detail completions record sundry as requested by the NM OCD Aztec District III office. AEC feels that the only information that actually should be amended to conform with the completions record is that #24 - Tubing Record should reflect that the 2 3/8" OD 4.6# EUE tubing landed at 6,239' on 5/25/14.

Finally, we want to note that AEC filed the attached Form 3160-4 Completion Report and Log on 6/18/15 with the BLM with the attached sheet for exhibits and as noted above, it was accepted for record on 6/23/15. We included the Perforation Design sheet, noting the Perforation Locations; The Final Directional Survey and the Geologist Report, which included information relating to the Formation Tops and the Lithology and Shows.

OIL CONS. DIV DIST. 3

ACCEPTED FOR RECORD

OCT 19 2015

OCT 14 2015

FARMINGTON FIELD OFFICE
BY: William Tambekou

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)
Randall W. Maxey

Title Permitting and Regulatory Manager

Signature

Rand. W. Maxey

Date 08/31/2015

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

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

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.

(Instructions on page 2)

NMOCD

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB NO. 1004-0137
Expires October 31, 2014

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other 1b. Type of Completion <input type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resist. <input type="checkbox"/> Other						5. Lease Serial No NMSF 081332 / 081332-B			
2. Name of Operator Anschutz Exploration Corporation						6. If Indian, Allottee or Tribe Name None			
3. Address 555 17th Street, Suite 2400, Denver, CO 80202						7. Unit or CA Agreement Name and No None			
4. Location of Well (Report location clearly and in accordance with Federal requirements) At surface: SHL: Unit B, 1070' fml & 2383' fel of Section 14, T25N, R2W At top prod. interval reported below: 892' fml & 3016' fel Section 14, T25N, R2W At total depth: BHL: Unit D, 830' fml & 330' fwl of Section 15, T25N, R2W						8. Lease Name and Well No Regina Com 25-2-14-15 #1H			
14. Date Spudded 12/05/2014						15. Date T.D. Reached 01/20/2015			
16. Date Completed 05/21/2015 <input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod						9. API Well No 30-039-31203 - 0031			
18. Total Depth: MD 11412' TVD 6850.7'						19. Plug Back T.D.: MD 11,328' TVD			
20. Depth Bridge Plug Set: MD None TVD None						17. Elevations (DF, RKB, RT, GL)* RKB=7323.5', GL = 7306'			
21. Type Electric & Other Mechanical Logs Run (Submit copy of each) Array Induction Density, Array Induction, Spectral Density, Spectral, Borehole Volume						22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis) Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit report) Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit copy)			
23. Casing and Liner Record (Report all strings set in well)									
Hole Size	Size/Grade	Wt. (lb/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17 1/2"	13 3/8"	48# H40	0	300'	None	393	88.4	surface - cal	N/A
12 1/4"	9 5/8"	36# J55	0	2087'	1474	837	201	surface - cal	N/A
12 1/4"	9 5/8"	40# J55	2087	3795	1474	837	132	surface - cal	N/A
8 3/4"	7"	23# N80	0	5976'	5058	465	88.9	6100 - cal	N/A
8 3/4"	7"	23#P110	5976'	7298'	5058	465	66.7	6100 - cal	N/A
6 3/4"	4 1/2"	13.5#	6835	11375	None	400	110.4	6873 - cal	N/A
24. Tubing Record									
Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	
2 3/8"	6203'	None							
25. Producing Intervals								26. Perforation Record	
Formation	Top	Bottom	Perforation Interval	Size	No. Holes	Perf. Status			
A) Ojito SS	7,298'	11,480'	See Attached Spreadsheet	see sheet	see sheet	see sheet			
B)									
C)									
D)									
27. Acid, Fracture, Treatment, Cement Squeeze, etc.									
Depth Interval	Amount and Type of Material								
See Attached Spreadsheet	9,502,811 SCF of N2								
	721,163 lbs. of 20/40 CRC Sand (Resin Coated)								
	14,368 lbs. of 100 Mesh								
	20,778 bbls. of clean fluid								
28. Production - Interval A									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
5/21/15	6/8/15		→	21	150	13	38.4		Flowing
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
open	80	330	→	21	150	13	714	Producing	
28a. Production - Interval B									
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

*(See instructions and spaces for additional data on page 2)

OPERATOR

FARMINGTON FIELD OFFICE
BY: William Tambekou

ACCEPTED FOR RECORD

28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Cor. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Cor. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

29. Disposition of Gas (Solid, used for fuel, vented, etc.)

solid

30. Summary of Porous Zones (Include Aquifers)

Show all important zones of porosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

See Attached Sheet (p. 3 - Formation Markers)

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
See Attached Sheet (p. 4-12) Lithology...				San Jose Nacimiento	surface 1603
				Ojo Alamo Ss Kirtland/ Fruitland	3170 3286
				Pictured Cliffs Ss Lewis Shale	3403 3507
				Huerfano Bentonite Chacra Ss	3860 4408
				Base Chacra Ss/ Lewis Sh Cliff House Ss	4448 5143
				Menefee Point Lookout Ss	5282 5575
				Mancos Sh Ojito Ss	5570 6914

32. Additional remarks (include plugging procedure):

Have attached the following documents:

"Regina Corn Perforation Design Sheet"

Final Directional Survey Spreadsheet (not certified)

Geologic Report (pages 3-12, including Formation Markers & Lithology & Shows)

Logs: 1. Array Induction Density/ Neutron Gamma Ray Memory Log, 2. Array Induction Gamma Ray Memory Log, 3. Spectral Density Dual Spaced Neutron Gamma Ray Memory Log, 4. Spectral Gamma Ray Memory Log, 5. Borehole Volume Memory Log

33. Indicate which items have been attached by placing a check in the appropriate boxes:

☒ Electrical/Mechanical Logs (1 full set req'd.)☒ Geologic Report☐ DST Report☒ Directional Survey☐ Sundry Notice for plugging and cement verification☐ Core Analysis☐ Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)*

Name (please print) Randall W. MaxeyTitle Permitting and Regulatory ManagerSignature R. W. MaxeyDate 06/18/2015

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.

(Continued on page 3)

(Form 3160-4, page 2)

Regina Com Perforation Design Sheet

Stage	Perfs (MD)	Plug	Shot Density	Phasing Degrees	Hole Diameter Inches	Penetration	Total shots per stage	Total shots for the well
1	11,282'	Float Collar	Cut 1	120	3/16"	Jet		
	11,260'		Cut 2	120	3/16"	Jet		
	11,200'		Cut 3	120	3/16"	Jet		
	11,125'							
2	10,950-53'	No Plug	6	60	0.42"	Deep		
	10,850-53'		6	60	0.42"	Deep	36	
3	10,715-18'	No Plug	6	60	0.42"	Deep		
	10,615-18'		6	60	0.42"	Deep	36	
4	10,410-13'	10,550'	6	60	0.42"	Deep		
	10,300'-03'		6	60	0.42"	Deep	36	
5	10,120-23'	10,250'	6	60	0.42"	Deep		
	10,050-53'		6	60	0.42"	Deep	36	
6	9,950-53'	10,000'	6	60	0.42"	Deep		
	9,860-62'		6	60	0.42"	Deep		
	9,750-52'		6	60	0.42"	Deep	42	
7	9,550-53'	9,620'	6	60	0.42"	Deep		
	9,500-03'		6	60	0.42"	Deep	36	
8	9,310-13'	9,400'	6	60	0.42"	Deep		
	9,250-52'		6	60	0.42"	Deep		
	9,180-82'		6	60	0.42"	Deep	42	
9	9,075-78'	9,120'	6	120	0.42"	Deep		
	8,990-93'		6	120	0.42"	Deep		
10	8,880-82'	8,830'	6	120	0.42"	Deep	48	
	8,800-03'		6	120	0.42"	Deep		
	8,680-83'		6	120	0.42"	Deep		
	8,560-62'		6	120	0.42"	Deep	48	
11	8,140-43'	8,250'	6	120	0.42"	Deep		
	8,025-28'		6	120	0.42"	Deep		
	7,960-62'		6	120	0.42"	Deep	48	
12	7,750-53'	7,850'	6	120	0.42"	Deep		
	7,650-53'		6	120	0.42"	Deep		
	7,550-52'		6	120	0.42"	Deep	48	456

Notes:

The plug depths correlate with the gun run they will be set on.

These depths are just estimates. We will not know exact depths until the guns have been fired.

Stage 1 is a CT hydrajel

There are a total of 12 stages for this well

The stages ARE ALL DIFFERENT. Pay attention to footages and spacing.

Final Directional Survey

Anschutz Exploration Corporation

Regina Com 25-2-14-15

Depth ft	INC deg	AZI deg	TVD ft	N/S ft	E/W ft	VS ft	DLS (°/100ft)
0	0	0	0	0	0	0	0
389	0.4	256.6	389	-0.31	-1.32	1.31	0.1
423	0.4	266.1	423	-0.35	-1.55	1.54	0.19
453	0.4	265.1	453	-0.37	-1.76	1.75	0.02
483	0.3	278.6	482.99	-0.36	-1.95	1.93	0.43
604	0.4	288.5	603.99	-0.18	-2.66	2.65	0.1
666	0.4	290.4	665.99	-0.04	-3.07	3.06	0.02
696	0.4	296.8	695.99	0.05	-3.26	3.26	0.15
757	0.4	289.9	756.99	0.21	-3.65	3.66	0.08
818	0.5	287.4	817.99	0.37	-4.1	4.12	0.17
879	0.8	299.8	878.98	0.66	-4.73	4.75	0.54
940	0.7	299.2	939.98	1.05	-5.42	5.46	0.16
1003	1.1	299.1	1002.97	1.53	-6.29	6.35	0.63
1064	1	299.7	1063.96	2.08	-7.26	7.34	0.16
1125	1.1	298.3	1124.95	2.62	-8.24	8.35	0.17
1186	1.2	293.3	1185.94	3.15	-9.34	9.47	0.23
1248	1.4	294.6	1247.92	3.72	-10.63	10.78	0.33
1309	1.5	300.9	1308.9	4.45	-11.99	12.17	0.31
1371	1.4	310.9	1370.88	5.36	-13.26	13.48	0.44
1432	1.6	314.9	1431.86	6.45	-14.42	14.69	0.37
1494	1.7	317.4	1493.84	7.73	-15.66	15.98	0.2
1553	1.9	319.6	1552.81	9.12	-16.88	17.27	0.36
1618	2	315.4	1617.77	10.75	-18.38	18.83	0.27
1682	2	322.6	1681.73	12.43	-19.84	20.37	0.39
1743	2.2	317.4	1742.69	14.14	-21.28	21.88	0.45
1807	2.1	319.3	1806.64	15.93	-22.88	23.56	0.19
1869	2.2	323.2	1868.6	17.75	-24.33	25.09	0.29
1932	2.4	324.1	1931.55	19.79	-25.83	26.67	0.32
1994	2.4	329.5	1993.49	21.96	-27.25	28.19	0.36
2057	2.5	333.7	2056.44	24.32	-28.53	29.57	0.33
2120	2.7	336.6	2119.37	26.92	-29.73	30.88	0.38
2183	2.9	337.1	2182.3	29.75	-30.93	32.21	0.32
2246	3	340.1	2245.21	32.77	-32.12	33.53	0.29
2309	3	342.9	2308.13	35.89	-33.16	34.71	0.23
2373	3.1	343.7	2372.04	39.15	-34.14	35.83	0.17
2436	2.6	344.5	2434.96	42.17	-35	36.82	0.8
2500	2.6	346.6	2498.89	44.98	-35.72	37.67	0.15
2562	2.4	350.2	2560.83	47.62	-36.27	38.33	0.41
2625	3.2	13.9	2623.76	50.63	-36.07	38.26	2.21
2688	4	16.2	2686.64	54.45	-35.04	37.4	1.29
2749	4.7	17.3	2747.46	58.88	-33.7	36.26	1.16
2812	5.3	16.3	2810.22	64.13	-32.12	34.91	0.96
2873	5.4	16.7	2870.95	69.59	-30.5	33.53	0.17

Final Directional Survey

Anschutz Exploration Corporation

Regina Com 25-2-14-15

Depth ft	INC deg	AZI deg	TVD ft	N/S ft	E/W ft	VS ft	DLS (°/100ft)
2936	5.4	17.2	2933.67	75.26	-28.77	32.05	0.07
3000	5.2	16.8	2997.4	80.91	-27.04	30.58	0.32
3062	5	17.4	3059.15	86.18	-25.42	29.19	0.33
3125	4.7	18.5	3121.93	91.25	-23.78	27.77	0.5
3188	4.6	21	3184.72	96.05	-22.06	26.26	0.36
3251	3.9	19.6	3247.55	100.43	-20.44	24.83	1.12
3314	3.1	19	3310.43	104.06	-19.16	23.72	1.27
3377	2.6	20.2	3373.35	107.01	-18.11	22.8	0.8
3440	2.2	30	3436.3	109.4	-17.02	21.81	0.91
3503	1.1	50	3499.27	110.83	-15.95	20.81	1.95
3566	0.6	92.3	3562.26	111.21	-15.16	20.03	1.22
3628	0.8	97.1	3624.26	111.14	-14.4	19.27	0.34
3690	0.8	106.8	3686.25	110.97	-13.56	18.42	0.22
3744	0.6	103.2	3740.25	110.79	-12.92	17.78	0.38
3813	1.1	101.5	3809.24	110.58	-11.92	16.77	0.73
3845	0.9	107.6	3841.24	110.44	-11.38	16.23	0.71
3908	1.1	103.6	3904.23	110.15	-10.32	15.15	0.34
3971	0.9	110.1	3967.22	109.84	-9.27	14.09	0.36
4033	0.8	99.3	4029.21	109.6	-8.38	13.19	0.3
4096	0.8	108.5	4092.2	109.39	-7.53	12.34	0.2
4158	0.9	112.3	4154.2	109.07	-6.67	11.46	0.19
4221	1	106.8	4217.19	108.72	-5.69	10.46	0.21
4282	0.9	117	4278.18	108.35	-4.75	9.51	0.32
4344	0.8	122.6	4340.17	107.89	-3.95	8.69	0.21
4406	1	121.8	4402.17	107.38	-3.13	7.85	0.32
4468	0.8	119.8	4464.16	106.88	-2.29	6.99	0.33
4531	0.9	122.4	4527.15	106.39	-1.49	6.17	0.17
4593	0.8	123	4589.14	105.89	-0.72	5.37	0.16
4656	0.7	135.8	4652.14	105.38	-0.08	4.72	0.31
4718	1	130	4714.13	104.76	0.6	4.01	0.5
4780	0.7	129.4	4776.13	104.17	1.3	3.28	0.48
4842	1	130.5	4838.12	103.58	2.01	2.55	0.48
4904	1	130.5	4900.11	102.88	2.83	1.7	0
4967	1	121.4	4963.1	102.23	3.72	0.78	0.25
5030	0.9	126.8	5026.09	101.65	4.58	-0.11	0.21
5092	0.9	134.8	5088.08	101.02	5.32	-0.87	0.2
5155	1	136.5	5151.07	100.27	6.05	-1.63	0.16
5217	0.9	127.1	5213.07	99.58	6.81	-2.42	0.3
5280	0.9	138.5	5276.06	98.91	7.53	-3.17	0.28
5343	0.7	140.8	5339.05	98.25	8.1	-3.77	0.32
5405	0.9	141.6	5401.05	97.57	8.64	-4.35	0.32
5468	0.6	131.7	5464.04	96.96	9.2	-4.93	0.52
5531	0.7	112	5527.04	96.6	9.8	-5.54	0.39

Final Directional Survey

Anschutz Exploration Corporation

Regina Com 25-2-14-15

Depth ft	INC deg	AZI deg	TVD ft	N/S ft	E/W ft	VS ft	DLS (°/100ft)
5593	0.5	112.6	5589.03	96.35	10.4	-6.15	0.32
5656	0.4	110.6	5652.03	96.17	10.86	-6.62	0.16
5719	0.5	119.1	5715.03	95.96	11.31	-7.08	0.19
5783	0.4	117	5779.03	95.72	11.75	-7.53	0.16
5845	0.4	140.4	5841.03	95.46	12.08	-7.87	0.26
5878	0.4	133	5874.02	95.29	12.24	-8.04	0.16
5940	0.4	148.5	5936.02	94.96	12.51	-8.32	0.17
6002	0.4	155.5	5998.02	94.58	12.71	-8.54	0.08
6064	1.2	123.4	6060.02	94.02	13.34	-9.2	1.43
6127	0.4	149.5	6123.01	93.47	14.01	-9.88	1.36
6158	0.2	163	6154.01	93.32	14.08	-9.96	0.68
6189	1	332	6185.01	93.51	13.97	-9.84	3.86
6220	2.8	336.2	6215.99	94.44	13.53	-9.37	5.82
6251	4.4	338.9	6246.93	96.25	12.8	-8.56	5.19
6282	6.2	340.1	6277.79	98.93	11.8	-7.44	5.82
6313	7.6	338.7	6308.57	102.41	10.49	-5.97	4.55
6344	8.9	328.1	6339.25	106.36	8.48	-3.79	6.44
6375	10.1	318.4	6369.82	110.43	5.4	-0.54	6.44
6406	11.9	312.6	6400.25	114.62	1.25	3.8	6.81
6437	13.7	307.2	6430.48	119.01	-4.03	9.26	6.97
6469	15.6	303.2	6461.44	123.66	-10.65	16.08	6.72
6500	16.8	298.1	6491.21	128.05	-18.09	23.7	6
6531	18.4	291.8	6520.76	131.98	-26.59	32.36	8.02
6562	20.5	286.1	6550	135.3	-36.35	42.26	9.12
6593	23.1	281	6578.78	137.97	-47.54	53.56	10.37
6625	25.9	278	6607.9	140.14	-60.62	66.72	9.57
6656	28.9	275.6	6635.42	141.81	-74.78	80.95	10.31
6687	32	274.8	6662.14	143.23	-90.43	96.64	10.08
6718	35.5	273.7	6687.91	144.5	-107.6	113.85	11.46
6749	38.4	273.7	6712.68	145.7	-126.2	132.48	9.35
6780	41.7	274	6736.41	147.04	-146.09	152.42	10.66
6812	44.9	274.6	6759.69	148.69	-167.98	174.35	10.08
6844	48.1	275.5	6781.72	150.74	-191.09	197.54	10.21
6875	50.2	276	6801.99	153.09	-214.42	220.95	6.88
6906	52.9	275.7	6821.27	155.56	-238.57	245.18	8.74
6938	56.3	275.1	6839.8	158.01	-264.54	271.23	10.73
6970	60.1	274.4	6856.66	160.26	-291.63	298.4	12.02
7001	63.5	272.9	6871.31	161.99	-318.9	325.71	11.77
7033	66.7	272.7	6884.78	163.41	-347.88	354.73	10.02
7064	70	272.3	6896.22	164.67	-376.66	383.54	10.71
7096	74	272.7	6906.1	166	-407.06	413.97	12.56
7127	77.3	272.9	6913.79	167.46	-437.06	444	10.66
7159	79.7	273.5	6920.16	169.21	-468.36	475.35	7.72

Final Directional Survey

Anschutz Exploration Corporation

Regina Com 25-2-14-15

Depth ft	INC deg	AZI deg	TVD ft	N/S ft	E/W ft	VS ft	DLS (°/100ft)
7190	82.2	273.3	6925.04	171.03	-498.92	505.96	8.09
7222	86	273.4	6928.33	172.89	-530.69	537.78	11.88
7234	87.5	273.1	6929.01	173.57	-542.65	549.76	12.75
7324	92.8	272.5	6928.77	<u>177.96</u>	<u>-632.51</u>	639.72	5.93
7356	93.1	272.9	6927.13	179.47	-664.43	671.68	1.56
7418	94.3	273.5	6923.13	182.92	-726.21	733.55	2.16
7481	93.3	271.1	6918.95	185.44	-789.01	796.4	4.12
7544	91.7	268.8	6916.2	185.39	-851.94	859.27	4.44
7608	90.9	268.9	6914.75	184.1	-915.91	923.12	1.26
7670	90.5	269	6913.99	182.97	-977.9	985	0.67
7733	90.8	270.3	6913.28	182.58	-1040.89	1047.91	2.12
7796	89.7	270.8	6913	183.19	-1103.89	1110.87	1.92
7859	90.1	270.9	6913.11	184.12	-1166.88	1173.85	0.65
7923	90.3	270.4	6912.89	184.85	-1230.88	1237.81	0.84
7986	90.4	270.5	6912.5	185.34	-1293.87	1300.77	0.22
8049	90	270.2	6912.28	185.73	-1356.87	1363.72	0.79
8079	90.6	269.6	6912.13	185.68	-1386.87	1393.69	2.83
8143	90.1	270.4	6911.74	185.68	-1450.87	1457.63	1.47
8206	89.5	270.1	6911.96	185.95	-1513.87	1520.58	1.06
8269	90.6	271.3	6911.9	186.72	-1576.86	1583.55	2.58
8331	90.9	271.4	6911.09	188.18	-1638.84	1645.53	0.51
8394	92.1	271.9	6909.44	189.99	-1701.79	1708.5	2.06
8457	91.6	271.2	6907.41	191.7	-1764.73	1771.45	1.36
8520	90.9	271.3	6906.03	193.07	-1827.7	1834.42	1.12
8582	91.2	270.9	6904.9	194.26	-1889.68	1896.39	0.81
8644	91.1	271.2	6903.65	195.4	-1951.66	1958.36	0.51
8708	90.6	271.3	6902.7	196.79	-2015.63	2022.34	0.8
8770	89.5	271.2	6902.65	198.15	-2077.62	2084.32	1.78
8833	89.6	270.8	6903.14	199.24	-2140.61	2147.3	0.65
8896	89.3	270.1	6903.75	199.74	-2203.6	2210.25	1.21
8960	90.2	269.3	6904.03	199.4	-2267.6	2274.17	1.88
9023	92.4	269	6902.6	198.47	-2330.57	2337.04	3.52
9085	92.6	269.1	6899.89	197.44	-2392.5	2398.87	0.36
9148	92.7	269.7	6896.98	196.78	-2455.43	2461.71	0.96
9211	92.4	269.2	6894.18	196.18	-2518.37	2524.56	0.92
9274	91.5	269.8	6892.03	195.63	-2581.33	2587.43	1.72
9336	91.3	270	6890.52	195.52	-2643.31	2649.35	0.46
9399	91	270.3	6889.26	195.69	-2706.3	2712.28	0.67
9462	91.3	270.1	6887.99	195.91	-2769.28	2775.22	0.57
9525	90.4	270.1	6887.06	196.02	-2832.28	2838.15	1.43
9588	90.7	269.7	6886.45	195.91	-2895.27	2901.09	0.79
9679	91.5	270.6	6884.7	196.15	-2986.25	2991.99	1.32
9742	93.5	272.2	6881.96	197.68	-3049.17	3054.91	4.06

Final Directional Survey

Anschutz Exploration Corporation

Regina Com 25-2-14-15

Depth ft	INC deg	AZI deg	TVD ft	N/S ft	E/W ft	VS ft	DLS (°/100ft)
9776	93.2	273	6879.97	199.22	-3083.08	3088.85	2.51
9839	92.1	272.7	6877.06	202.35	-3145.93	3151.78	1.81
9902	93	272.6	6874.25	205.26	-3208.8	3214.72	1.44
9965	91.3	271.9	6871.89	207.73	-3271.7	3277.67	2.92
10027	90.2	270.2	6871.08	208.87	-3333.68	3339.64	3.27
10090	90.1	270.8	6870.91	209.42	-3396.68	3402.6	0.97
10153	89.8	270.9	6870.97	210.35	-3459.67	3465.58	0.5
10216	91.5	271	6870.25	211.4	-3522.66	3528.55	2.7
10280	91.9	270.9	6868.36	212.46	-3586.62	3592.5	0.64
10343	92.6	270.8	6865.88	213.39	-3649.57	3655.42	1.12
10406	91.3	270.8	6863.74	214.27	-3712.52	3718.35	2.06
10469	90.5	269.6	6862.75	214.49	-3775.51	3781.29	2.29
10532	89.9	269.8	6862.53	214.16	-3838.51	3844.22	1
10595	89.5	269.2	6862.86	213.61	-3901.51	3907.13	1.14
10658	89.3	269	6863.52	212.62	-3964.5	3970.01	0.45
10720	91	268	6863.36	211	-4026.47	4031.86	3.18
10783	92.5	267.6	6861.43	208.58	-4089.39	4094.61	2.46
10846	93.1	267.6	6858.35	205.95	-4152.26	4157.3	0.95
10908	92.4	268.5	6855.38	203.84	-4214.16	4219.04	1.84
10970	91	269.7	6853.54	202.87	-4276.12	4280.9	2.97
11033	90.5	269.4	6852.72	202.37	-4339.11	4343.81	0.93
11096	90.6	270	6852.11	202.04	-4402.11	4406.73	0.97
11159	90.3	271.6	6851.62	202.92	-4465.1	4469.7	2.58
11222	90.1	271.6	6851.4	204.68	-4528.07	4532.69	0.32
11285	89.7	271.4	6851.51	206.33	-4591.05	4595.68	0.71
11348	90.6	272	6851.34	208.2	-4654.02	4658.67	1.72
11412	90.6	272	6850.67	<u>210.43</u>	<u>-4717.98</u>	4722.67	0

(Sec 15)

BHL $\left\{ \begin{array}{l} Y \rightarrow (1070 - 210.43)_{ft} = 859.57 \approx 860 ft | N \\ X \rightarrow (10559.14 - 2393 - 4717.98)_{ft} = 3458.16 - 5282.61 \approx 1824.45 \approx 1825 ft | E \end{array} \right.$

(Sec: 14)

POE $\left\{ \begin{array}{l} Y \rightarrow (1070 - 177.96)_{ft} = 892.04 \approx 892 ft | N \\ X \rightarrow (3015.51 - 2633.67)_{ft} = 381.84 \approx 382 ft | E \end{array} \right.$

William Tambekou

06-23-15

10/14/15

FORMATION TOPS

Formation	Sample Top MD	Wireline Top	TVD	Subsea
KB 7323.5				
TERTIARY				
San Jose Fm	Surface	-	-	-
Nacimiento Fm	1603	-	1603	5721
Ojo Alamo Ss	3170	-	3167	4157
CRETACEOUS				
Kirtland/Fruitland	3286	-	3282	4041
Pictured Cliffs Ss	3403	-	3399	3924
Lewis Shale	3507	-	3503	3820
Huerfanito Bentonite	3860	-	3856	3467
Chacra Ss	4408	-	4404	2919
Base Chacra Ss/Lewis Sh	4448	-	4444	2879
Cliff House Ss	5143	-	5139	2184
Menefee Fm	5282	-	5278	2045
Point Lookout Ss	5575	-	5571	1752
Mancos Sh	5770	-	5766	1557
Ojito Ss	6914	-	6826	497
Total Depth Driller	11412	-	6851	473

LITHOLOGY AND SHOWS

The following descriptions are interpretive. Mud loggers collected lagged 30-ft samples along with spot samples to constrain select tops and when drilling activities dictated. Samples were reviewed with the aid of radial MWD gamma from 4050' to 11412' TD. All depths are rig depths. Through-bit logging tools were used for the horizontal section of the well.

Samples were inspected using an Olympus SZ61 stereoscope. Grain sizes were determined by use of an AmStrat grain size comparator. Colors of wet and dry cuttings were determined from the Rock-Color Chart distributed by the Geological Society of America; most colors given are dry since so many of the cuttings disintegrate rapidly in water. 10% HCl was used in acid reaction tests, and Alizarin red aided carbonate species determination.

Selected samples were examined for oil fluorescence with a US GeoSupply brand fluoroscope. Cut tests for liquid hydrocarbons were performed with solvent on dry cuttings. All samples collected after intermediate casing were drilled with Escal synthetic oil-base mud, sieved in synthetic oil-base, then triple rinsed in Entron (n-propyl bromide) before drying. This process removes all surface fluorescence and significantly affects the results of cut tests. Entron is also used for density separation of the sample cuttings from the lost circulation material added to the drilling mud.

Significant gas shows, as determined with a Dual FID-TCD Agilent Gas Chromatograph from the start of the well and the dq1000 Mass Spectrometer starting at 3800', are described in each formation overview. The reader should refer to the accompanying mud logs for the lagged record of all gas shows.

All rocks were described by Ryan A. White.

SAN JOSE FM	SAMPLE TOP: Surface LOG: N/A TVD: N/A SUBSEA: N/A
Overview:	Local geologic maps place the lower Eocene San Jose Formation at the surface location of the Regina Com 25-2-14-15 1H. The San Jose Formation is defined as purely terrestrial deposits consisting of alternating sandstones and shales. Surface investigations aided in the description of this section as nearby outcrops were plentiful. No significant gas or liquid hydrocarbons were observed in this section however the many sandstone facies of this section may be aquifers.
Conductor:	20" set at 77.5' KB
78' - 150'	Entirely SANDSTONE CONGLOMERATE : overall light gray (N7) appearance, occurs as loose, translucent to milky white, quartz grains, medium to very coarse grain, grains up to 5mm, well rounded, moderately poor to poorly sorted, no cementation observed, rare bituminous staining, no fluorescence.
150' - 848'	Alternating series of SANDSTONE : occurs as loose translucent quartz and medium light gray (N7) lithic grains, fine to medium rounded grains, moderately sorted, semi-quartzose, common carbonaceous flakes, petrified wood debris and rare clear muscovite, rare clusters exhibit carbonate cement, no fluorescence; and SHALE : grayish red (10R 4/2) to very dusky red (10R 2/), moderately firm when dry,

LITHOLOGY AND SHOWS

extremely soft when wet, platy cuttings, very hydrophilic, cuttings decrepitate in H₂O, commonly smooth, locally very gritty/silty, non-calcareous, no fluorescence.

Surface Casing: 13 3/8" set at 300'.

848' - 1603' Alternating series of **SANDSTONE**: overall grayish orange pink (5YR 7/2), occurs only as loose, fine to medium quartz grains, moderate sorting, rounded, clean, no observed cement or porosity, no fluorescence; and **SHALE**: medium light gray (N6), platy cuttings, smooth, cuttings slightly swell in H₂O, no reaction in HCl, no fluorescence; becomes coarser down section.

NACIMIENTO FM SAMPLE TOP: 1603' LOG: N/A TVD: 1603' SUBSEA: 5721'

Overview: A small unconformity lies between the San Jose Formation and the non-marine shales and sandstones of the Nacimiento Formation. The Nacimiento consists primarily of lacustrine deposits in contrast to the overlying sandstones of the San Jose. Total gas reached a maximum of 2620 units and trace amounts of light brown crude oil were observed at the shakers while drilling the Nacimiento.

1603' - 2040' Primarily **SHALE**: medium gray (N5), smooth, sub-platy cuttings, moderately soft, non-calcareous, no fluorescence; with lesser amounts of **SHALE**: grayish brown (5YR 3/2), moderately firm, sub-blocky to sub-platy, slightly gritty, no fluorescence; and minor beds of **SANDSTONE**: occurs as loose quartz sand grains, trace lithic fragments, fine grained, well sorted, well rounded, no observed porosity, no fluorescence.

2040' - 2152' Primarily **SANDSTONE**: occurs as loose sand grains and rare clusters, fine to very fine grained, moderate sorting, no observed porosity, no fluorescence; with significant beds of **SHALE**: medium gray (N5), sub-platy, moderately smooth, trace grit, non-calcareous, no fluorescence.

2152' - 2322' Mostly **SHALE**: medium dark gray (N4) and medium gray (N5), moderately firm, sub platy to sub rounded cuttings, smooth, non-calcareous, no fluorescence; with lesser amounts of **SHALE**: greenish gray (5GY 6/1), sub blocky cuttings, smooth, waxy appearance non-calcareous, no fluorescence.

2322' - 2340' Significant bed of **SANDSTONE**: occurs as loose sand grains and rare clusters, fine to very fine grained, moderate sorting, no observed porosity, no fluorescence; unusual chromatography suggests possible non-calibrated gas show.

2340' - 2581' Mostly **SHALE**: medium dark gray (N3), moderately firm to moderately soft, sub platy to sub rounded cuttings, very smooth, non-calcareous, no fluorescence; with lesser amounts of **SANDSTONE**: occurs as loose sand grains and rare clusters, fine to very fine grained, moderate sorting, no observed porosity, no fluorescence, grades to **SILTSTONE**.

LITHOLOGY AND SHOWS

Sidetrack 1: After drilling to 3799', fished and plugged back to 2520'. Sidetrack 1 was successfully kicked off at 2581'. The following rock descriptions and formation tops are from Sidetrack 1. Reader may also see mud log of original hole regarding first penetration of interval 2581' - 3799'.

2581' - 3040' Mostly **SHALE**: medium dark gray (N3), moderately firm to moderately soft, sub platy to sub rounded cuttings, very smooth, non-calcareous, no fluorescence; with lesser amounts of **SANDSTONE**: occurs as loose sand grains and rare clusters, fine to very fine grained, moderate sorting, no observed porosity, no fluorescence, grades to **SILTSTONE**.

3040' - 3170' Dominantly **SANDSTONE**: overall white (N9) to very pale orange (10YR 8/2) appearance, occurs as loose fine to medium, rounded quartz grains, moderate to moderately poor sorting, bimodal, no fluorescence; with thin beds of **SHALE**: medium dark gray (N4) to dark gray (N3), platy to fissile, smooth, non-calcareous, no fluorescence.

OJO ALAMO SS SAMPLE TOP: 3170' LOG: N/A TVD: 3167' SUBSEA: 4157'

Overview: The Ojo Alamo Sandstone marks the base of the Tertiary section of the San Juan Basin. Total gas reached a maximum of 33 units in the original hole and 18 units in the sidetrack. No liquid hydrocarbons were observed in this section in either hole. A significant unconformity lies between the Ojo Alamo and the underlying Cretaceous rocks. Offset logs significantly aided this pick.

3170' - 3286' Nearly entirely **SANDSTONE**: occurs as loose grains, medium to very coarse grained, poorly sorted, quartzose, rare feldspar, rounded shale cuttings likely lithic clasts, silica cement on rare clusters, no fluorescence; very thin beds of **SHALE**: dark gray (N3), moderately firm, fissile to needlelike cuttings, earthy to slightly smooth, non-calcareous, no fluorescence.

KIRTLAND SH/
FRUITLAND FM SAMPLE TOP: 3286' LOG: N/A TVD: 3282' SUBSEA: 4041'

Overview: The Cretaceous Kirtland Shale/Fruitland Formation consists of one formation at this point in the basin but is recognized as independent formations in the western part of the basin. It consists of shale and significant coal which has been mined in other locations within the basin. Total gas rose significantly while drilling this section, reaching over 3000 units. Liquid hydrocarbon shows were not observed.

3286' - 3334' Almost entirely **SHALE**: medium gray (N5), locally dark gray (N3), moderately firm to moderately soft, smooth, non-calcareous, no fluorescence; with a minor bed of **SANDSTONE**: occurs mostly as loose grains, fine to coarse grain, poorly sorted,

LITHOLOGY AND SHOWS

sub-rounded to sub-angular grains, quartzose, very rare feldspar and lithic fragments, silica cement, no visible porosity, no fluorescence.

3334' - 3403'

Very significant **COAL**: black (N0), blocky to platy cuttings, moderately firm, bituminous, commonly dull, locally vitreous, common thin <1mm bands of pyrite, no fluorescence; with only minor amounts of **SHALE**: medium gray (N5), locally dark gray (N3), moderately firm to moderately soft, smooth, non-calcareous, no fluorescence. ROP curves of coal beds correlated very well to offset logs, especially on the first penetration.

PICTURED CLIFFS SS SAMPLE TOP: 3403' LOG: N/A TVD: 3399' SUBSEA: 3924'

Overview:

The Pictured Cliffs Sandstone is a significant sandstone directly below the Fruitland coals. Total gas shows of up to 2204 units were recorded and very slow diffuse cuts were observed in addition to dark bituminous layers in many of the sandstones.

3403' - 3507'

Almost entirely **SANDSTONE**: occurs as poorly indurated sub-platy clusters, fine, rounded grains, semi-quartzose, lithic fragments, moderately well sorted, local carbonate cement, common bituminous lamina, rare pyrite lamina, no visible porosity, no fluorescence; with very minor beds of **SHALE**: medium gray (N5), moderately firm, platy to sub-platy cuttings, smooth to slightly gritty, calcareous, no fluorescence.

LEWIS SHALE SAMPLE TOP: 3507' LOG: N/A TVD: 3503' SUBSEA: 3820'

Overview:

The Lewis Shale interval represents the shallowest marine deposits encountered in the San Juan Basin and the last of the Cretaceous Intercontinental Seaway. The Chacra Sandstone member and Huerfanito Bentonite are included in the Lewis Shale in this report. Total gas varied from 30 to 75 units through the Lewis Shale. No liquid hydrocarbons were observed.

3507' - 3860'

Entirely **SHALE**: medium gray (N5) to medium light gray (N6), platy cuttings, moderately firm, slightly gritty, calcareous, no fluorescence.

2nd Surface Casing:

9 5/8" set at 3795'.

LITHOLOGY AND SHOWS

HUERFANITO BENT	SAMPLE TOP: 3860'	LOG: N/A	TVD: 3856'	SUBSEA: 3467'
3860' - 3862'	The Huerfanito Bentonite was encountered in this area though without gamma could not be precisely placed nor thickness accurately measured. This unit likely consists entirely of ALTERED TUFF : white (N9), chalky, bit scrapings, rare disseminated black mineral, no reaction in HCl, chips decrepitate in HCl, likely bentonitic, moderate pale yellow fluorescence.			
3862' - 4408'	Entirely SHALE : medium gray (N5), platy cuttings and scrapings, moderately firm, gritty appearance, locally calcareous, chips decrepitate in H2O, no fluorescence.			
CHACRA SS MBR	SAMPLE TOP: 4408'	LOG: N/A	TVD: 4404'	SUBSEA: 2919'
4408' - 4448'	The Chacra Sandstone Member of the Lewis Shale was a potential lost circulation zone. It consists of finely interbedded SANDSTONE : medium gray (N5) to dark medium gray (N4), firm blocky cuttings, very fine grained, semi-quartzose, gray wacke, non-calcareous, grades to SILTSTONE , no fluorescence.			
BASE CHACRA SS/ LOWER LEWIS SH	SAMPLE TOP: 4448'	LOG N/A	TVD: 4444'	SUBSEA: 2879'
4448' - 5143'	Almost entirely SHALE : medium gray (N5) to dark gray (N3), platy cuttings and scrapings, generally smooth, non-calcareous, no fluorescence.			
CLIFF HOUSE SS	SAMPLE TOP: 5143'	LOG: N/A	TVD: 5139'	SUBSEA: 2184'
Overview:	The Cliff House Sandstone represents a distinctive and widespread sandstone unit that divides the overlying Lewis Shale from the underlying Mesa Verde Group. Total gas rose abruptly in the Cliff House from a background of 70 units to shows over 2000 units. Cut tests in the Cliff House indicated liquid hydrocarbons and a strong condensate odor was observed at the shaker and pits after drilling though the Cliff House. The Cliff House Sandstone is the likely source of the flares observed while drilling and casing the curve section of the well.			
5143' - 5204'	Mostly SANDSTONE : light brownish gray (5YR 6/1), occurs as bit scrapings and loose grains, fine to very fine grained, quartzose, trace carbonate cement, rare porosity, very faint yellow fluorescence; with distinctive beds of SHALE : medium gray (N5) to medium dark gray (N4), commonly bit scrapings, earthy texture, non-calcareous, no fluorescence.			

LITHOLOGY AND SHOWS

5204' - 5282'	A 2091 unit gas show accompanied by SANDSTONE : light brownish gray (5YR 6/1), occurs as bit scrapings and loose grains, fine to very fine grained, well sorted quartzose, trace carbonate cement, fair porosity, faint yellow fluorescence; lesser amounts of SHALE : medium gray (N5) to medium dark gray (N4), commonly bit scrapings and platy cuttings, generally smooth texture, non-calcareous, no fluorescence.			
MENEFEE FM	SAMPLE TOP: 5282'	LOG: N/A	TVD: 5278'	SUBSEA: 2045'
Overview:	The Menefee Formation of the Mesa Verde Group represents a stratigraphically complex zone between the Lewis Shale and the underlying Mancos Shale. Total gas remained high through the Menefee with shows up to 4353 units though no concrete evidence of liquid hydrocarbons was observed.			
5282' - 5465'	Generally consists of thin, alternating sequences of SHALE : medium gray (N5) to medium dark gray (N4), platy cuttings, smooth texture, non-calcareous, no fluorescence; SANDSTONE : occurs as loose grains and bit scrapings, fine grained, well rounded, moderately well sorted, quartzose, no fluorescence; and COAL : black (N0), fissile cuttings, vitreous, bituminous, no fluorescence.			
5465' - 5575'	Thin alternating sequences as above with the addition of SHALE : moderate brown (5YR 3/4), platy, smooth, slightly earthy texture, non-calcareous, no fluorescence.			
POINT LOOKOUT SS	SAMPLE TOP: 5575'	LOG: N/A	TVD: 5571'	SUBSEA: 1752'
Overview:	The massive sandstone of the Point Lookout Sandstone represents the basal formation of the Mesa Verde Group. Total gas steadily declined while drilling the Point Lookout with a show of 3221 units that likely marked the top of the Point Lookout. Liquid hydrocarbons were not observed in this section and based on nearby wells is likely a depleted zone.			
5575' - 5770'	Dominantly SANDSTONE : white (N9) to light brownish gray (5YR 6/1), occurs as bit scrapings, fine to very fine grained, well rounded, moderate sorting, semi-quartzose, trace visible porosity, carbonate cement, trace dull yellow fluorescence; lesser amounts of SHALE : dark gray (N3), firm, platy cuttings, smooth, non-calcareous, no fluorescence.			

LITHOLOGY AND SHOWS

MANCOS SH SAMPLE TOP: 5770' LOG: N/A TVD: 5766' SUBSEA: 1557'

Overview: The very thick Mancos Shale represents one of the most widespread units in the San Juan Basin. It should be noted that only the Upper Mancos Shale was penetrated at this location. Total gas initially dropped then very steadily increased while drilling this section; due to heavy mud loss in this section and decreasing mud weight it is likely the source of the gas was from overlying formations. Cuts through the Mancos only provided trace evidence of liquid hydrocarbons but test results were likely skewed by rapidly changing mud properties.

5770' - 6105' Mostly **SHALE**: medium gray (N5), moderately firm platy cuttings and abundant bit scrapings, gritty and locally smooth textures, slightly to very silty, locally very thinly laminated, possibly hydrophilic, non-calcareous, no fluorescence; with small beds of **SILTSTONE**: light medium gray (N6), moderately firm to firm cuttings, sub-blocky, visible quartz and lithic grains, locally calcareous, carbonate and argillaceous matrix, wacke, no fluorescence, grades into very grained **SANDSTONE**.

6105' - 6650' Entirely **SHALE**: medium gray (N5) to medium dark gray (N4), moderately firm, platy cuttings and common bit scrapings, moderately smooth, dull texture, calcareous, common speckled yellow fluorescence.

KOP for Curve: Began building curve at 6170'.

6650' - 6914' Nearly entirely **SHALE**: medium gray (N5), moderately firm to firm large bit scrapings and platy cuttings, moderately smooth, calcareous, cuttings remain intact in HCl, common speckled yellow fluorescence; with trace amounts of **LIMESTONE**: white (N9), occurs as lineations in **SHALE** bit scrapings, calcite rhombs commonly embedded in chalky matrix, very effervescent, slight bitumen/oil staining, pale yellow fluorescence. This zone represents the most significant mud loss zone of the lower section.

OJITO SS SAMPLE TOP: 6914' LOG: N/A TVD: 6826' SUBSEA: 497'

Overview: The Ojito Sandstone member of the Mancos Shale, believed to be equivalent or nearly contemporary to the Gallup Sandstone Member, is the target of the Regina Com 25-2-14-15 1H. Total gas reached a maximum of 1049 units after intermediate casing was set. Cut tests generally yielded pale bluish white to very pale yellow, slow streaming cuts; residual halos were generally strong bluish white with hints of yellow. It should be noted that the entirety of the Ojito Sandstone was drilled using Escal synthetic oil based mud so the bluish white colorations likely result from the synthetic oil based mud. Significant mud loss was encountered in the Ojito implying an under pressured reservoir.

6914' - 6944' Mostly **SHALE**: medium dark gray (N4), moderately firm, platy cuttings, dull to slightly smooth, calcareous, common speckled to solid pale yellow fluorescence; with thin beds of **SANDSTONE**: overall white (N9) to yellowish gray (5Y 8/1),

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occurs as bit scrapings and loose grains, very fine grained, well sorted, quartz and calcite grains, carbonate cement, chips commonly decrepitate in HCl, ~5% to 15% of grains stain pink in Alizarin, cement does not stain, common bright pale yellowish blue fluorescence.

6944' - 6962'

The first major bed of Ojito **SANDSTONE**: overall light brownish gray (5YR 6/1) to white (N9), similar to above, very fine to fine grained, moderately sorted, rarer cuttings suggest porosity.

6962' - 7068'

A zone of thin beds and rapid lithology changes consisting of **SANDSTONE**: overall white (N9) to yellowish gray (5Y 8/1), occurs as bit scrapings and loose grains, very fine grained, well sorted, quartz and calcite grains, carbonate cement, chips commonly decrepitate in HCl, ~5% to 15% of grains stain pink in Alizarin, cement does not stain, common bright pale yellowish blue fluorescence; **SHALE**: blackish brown (5YR 2/1), moderately firm to moderately soft, occurs mostly as bit scrapings, earthy/dull texture, oily sheen, very slightly to non-calcareous, rare dull yellow fluorescence, commonly no fluorescence; and **SHALE**: medium dark gray (N4) to medium gray (N4), common bit scrapings, commonly gritty, calcareous, local pale yellow fluorescence.

7068' - 7100'

The second major bed of Ojito **SANDSTONE**: overall white (N9) to brownish gray (5YR 6/1), very fine grained, chalky carbonate cement, well sorted quartz and calcite grains, sub-rounded to rounded, thin <1mm bituminous lamina/oil staining, common yellow fluorescence.

7100' - 7298'

Another zone of thin beds consisting of **SANDSTONE**: overall white (N9) to brownish gray (5YR 6/1), very fine grained, chalky carbonate cement, well sorted quartz and calcite grains, sub-rounded to rounded, thin <mm bituminous lamina/oil staining, common yellow fluorescence; **SHALE**: brownish black (5YR 2/1), moderately firm, slightly earthy texture, slight oil sheen, non-calcareous, very dull pale yellow fluorescence; and **SHALE**: medium dark gray (N4) to medium light gray (N6), moderately firm platy cuttings and bit scrapings, gritty, silty to slightly silty, trace dull pale yellow fluorescence.

Intermediate Casing:

9 5/8" set at 7298'. All rocks above this point have been cased and cemented. All rocks below this point have been lined for production.

7298' - 7380'

A moderately significant bed of **SANDSTONE**: occurs as very small cuttings and loose sand grains, yellowish gray (5Y 8/1), quartz and possibly lithic grains, pinch sample has slight reaction in HCl, cement and porosity difficult to determine, trace to rare dull yellow fluorescence.

7380' - 7545'

Mostly **SHALE**: medium dark gray (N4) to brownish gray (5YR 4/1), occurs as moderately firm, thin platy cuttings, slightly gritty, slight to no reaction in HCl, trace to rare dull yellow fluorescence; and **SHALE**: brownish black (5YR 2/1) to brownish gray (5YR 4/1), occurs as small sub-rounded cuttings, moderately soft, easily scratched, earthy texture, oily sheen, trace dull yellow fluorescence.

7545' - 8360'

A moderately significant bed of **SANDSTONE**: light brownish gray (5YR 4/1), firm, sub-blocky cuttings and bit scrapings, very fine grained with fine grained

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	lamina, commonly interbedded, common black to dark brown bituminous lamina and oil staining, common yellow fluorescence.
8360' - 9010'	Mostly SHALE : medium dark gray (N4) to brownish gray (5YR 4/1), moderately firm, platy cuttings, slightly gritty, commonly silty, non-calcareous, trace dull yellow fluorescence.
9010' - 9070'	A very significant bed of SANDSTONE : occurs mostly as loose quartz grains, very fine to fine grains, rounded, fractured quartz grains suggest larger grains, rare oil staining and bituminous lamina, trace yellow fluorescence; this unit proved hard to penetrate and very poor motor yields were observed while 'bottom striking' this unit, consequently high inclination was achieved immediately after penetration and the horizontal distance maintained in this unit was adversely affected.
9070' - 9600'	Mostly SHALE : medium dark gray (N4) to brownish gray (5YR 4/1), very small cuttings, slight reaction in HCl, rare dull pale yellow fluorescence; and lesser amounts of SANDSTONE : occurs mostly as loose quartz grains, very fine to fine grains, rounded, fractured quartz grains suggest larger grains, rare oil staining and bituminous lamina, trace yellow fluorescence.
9600' - 9820'	Two moderately significant beds of SANDSTONE : light brownish gray (5YR 6/1), occurs as loose sand grains and poorly indurated bit scrapings, very poor sample quality, loose quartz grains, rare bit scrapings exhibit good visible porosity, pale greenish yellow fluorescence; bisected by beds of SHALE : medium dark gray (N4) to brownish gray (5YR 4/1), moderately firm, small cuttings, gritty, slight reaction in HCl, trace dull yellow fluorescence.
9820' - 10850'	A long section of the wellbore nearly parallel to dip in zone comprised mostly of SHALE : medium dark gray (N4) to brownish gray (5YR 4/1), occurs as moderately firm, very small cuttings, slightly gritty, slightly calcareous, rare very pale yellow fluorescence; and SHALE : brownish black (5YR 2/1), occurs as very small cuttings, platy, earthy texture, slightly calcareous, local pale yellow fluorescence.
10850' - 11040'	The uppermost major unit of Ojito SANDSTONE ; yellowish gray (5Y 8/1), moderately indurated clusters, very fine grained, well sorted, quartzose, trace fine lamina interbedded with SHALE , carbonate cement, no calcite grains, trace dull yellow fluorescence.
11040' - 11412' TD	Mostly SHALE : medium dark gray (N4), firm, platy cuttings, slightly gritty texture, commonly interbedded with SANDSTONE , common bituminous lamina, slightly calcareous, rare dull yellow fluorescence.