

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTJUN - 2 2009
OCD-ARTESIA
FORM APPROVED
OMB NO. 1004-0137
Expires March 31, 2007

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a Type of Well ☐ Oil Well ☒ Gas Well ☐ Dry ☐ Other		5 Lease Serial No NM-15295	
b Type of Completion ☐ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr. Other _____		6 If Indian, Allottee or Tribe Name N/A	
2 Name of Operator ENCORE OPERATING, L.P.		7 Unit or CA Agreement Name and No N/A	
3 Address 777 MAIN STREET, STE. 1400 FORT WORTH, TX. 76102		8 Lease Name and Well No CK FEDERAL # 4	
3a Phone No. (include area code) 817-877-9955		9 API Well No 30-015-35942	
4 Location of Well (Report location clearly and in accordance with Federal requirements)* At surface At top prod. interval reported below At total depth		10 Field and Pool, or Exploratory WHITE CITY PENN-GAS ✓	
11 Sec. T. R. M. on Block and Survey or Area SEC. 8-24S-26E		12 County or Parish EDDY	
13 State NM		17 Elevations (DF, RKB, RT, GL)* 3724	
14 Date Spudded 05/13/2008		15 Date T.D. Reached 06/28/2008	
16 Date Completed ☐ D & A ☒ Ready to Prod		17 Date Completed 10/22/2008	
18. Total Depth MD 12,350 TVD 12,350		19 Plug Back T.D. MD 12,288 TVD 12,288	
20 Depth Bridge Plug Set MD TVD		21 Type Electric & Other Mechanical Logs Run (Submit copy of each) GR/CCL	
22 Was well cored? ☒ No ☐ Yes (Submit analysis) Was DST run? ☒ No ☐ Yes (Submit report) Directional Survey? ☐ No ☒ Yes (Submit copy)		23 Casing and Liner Record (Report all strings set in well)	
24 Tubing Record		25 Producing Intervals	
26 Perforation Record		27 Acid Fracture, Treatment, Cement Squeeze, etc.	
28 Production - Interval A		28a Production - Interval B	

Hole Size	Size/Grade	Wt (#/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 H	48	0	430		440		0	
12 1/4	9 5/8 J55	40	0	2032		1675		0	
8 3/4	5 1/2 P11	20	0	12350	6005	2520		0	

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 3/8	11,597	11,597						

Formation	Top	Bottom	Perforated Interval	Size	No Holes	Perf Status
A) MORROW	11404	12084	11616 - 11626	6 SPF	67	OPEN
B)			11746 - 11752	6 SPF	37	CLOSED
C)			11830 - 11893	6 SPF	80	CLOSED
D)			12020 - 12168	6 SPF	167	CLOSED

Depth Interval	Amount and Type of Material
11615 - 11626	FRAC: W/30,000 # 20/40 VERSARPROP SAND

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr API	Gas Gravity	Production Method
10/23/2008	10/26/2008	24	→	0	112	0		579	FLOWING

Choke Size	Tbg Press Flwg	Csg Press	24 Hr Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
18/64	SI 180	0	→	0	112	0	0	PRODUCING

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	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)

ACCEPTED FOR RECORD

MAY 31 2009

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

**McVAY DRILLING COMPANY**

P.O. Box 2450
Hobbs, New Mexico 88241
(575) 397-3311
FAX 39-DRILL

Well Name and Num: CK Federal #4
Location: Sec. 8, T24S, R26E
Operator: Encore Operating
Drilling Contractor: McVay Drilling Company

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>	<u>Degrees @</u>	<u>Depth</u>
1.00	240	14.00	3928	14.25	6852	0.75	9475
0.25	430	13.75	4116	14.25	7040	1.00	9568
1.50	636	13.00	4396	15.50	7134	1.25	10229
1.00	904	14.00	4584	10.25	7228	1.00	10417
0.75	1127	14.00	4772	14.50	7415	1.25	10605
4.75	1445	14.50	4961	16.25	7602	0.75	10699
3.50	1570	14.75	5149	16.75	7696	0.40	10795
3.75	1727	1.00	5337	15.50	7790	1.00	11209
3.25	1884	1.00	5525	12.50	7979	0.25	11301
2.30	2138	13.75	5711	11.50	8168	1.50	11394
0.75	2234	13.25	5806	6.50	8357	1.50	11488
1.50	2228	14.00	5900	5.25	8450	1.75	11582
4.25	2516	14.00	5994	3.75	8544	0.75	11666
7.50	2799	14.50	6088	4.25	8638	0.75	11784
9.75	2893	14.00	6182	3.00	8821	1.75	11854
12.25	3081	14.75	6282	2.50	8915	1.75	11993
14.00	3270	10.50	6476	2.00	9010	1.00	12047
13.50	3458	11.00	6570	2	9103	1.75	12136
13.25	3740	13.00	6664	1	9290	1.75	12229
						2.00	12304

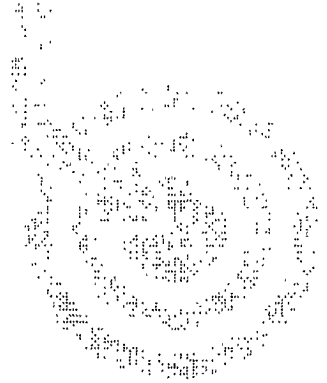
Drilling Contractor: McVay Drilling Company

By: H. H. [Signature]

Subscribed and sworn to before me this 10th day of July, 2008

[Signature]
Notary Public

My Commission Expires: 9-16-29 Lea County, New Mexico



Scientific Drilling

ENCORE

Field: White City Penn
Site: Eddy County, NM
Well: CK Federal #4
Wellpath: VH - Job #32K0508376
Survey: 05/25/08

This survey is correct to the best of my knowledge
and is supported by actual field data.

.....*Richardson*.....Company Representative

Notorized this date 24th of June, 2008.

Carrie Reed
Notary Signature
County of Midland
State of Texas





Scientific
Drilling

Scientific Drilling International Survey Report

Company: ENCORE	Date: 06/23/2008	Time: 10:56:36	Page: 1
Field: White City Penn	Co-ordinate(NE) Reference:	Site: Eddy County, NM, Grid North	
Site: Eddy County, NM	Vertical (TVD) Reference:	SITE 0.0	
Well: CK Federal #4	Section (VS) Reference:	Well (0.00N,0.00E,149.38Azi)	
Wellpath: VH - Job #32K0508376	Survey Calculation Method:	Minimum Curvature	Db: Sybase

Survey: 05/25/08	Start Date: 05/25/2008
KSRG 0'-1982'	
Company: Scientific Drilling Internatio	Engineer: Garza w/Halliburton
Tool: Keeper;Keeper Gyro	Tied-to: From Surface

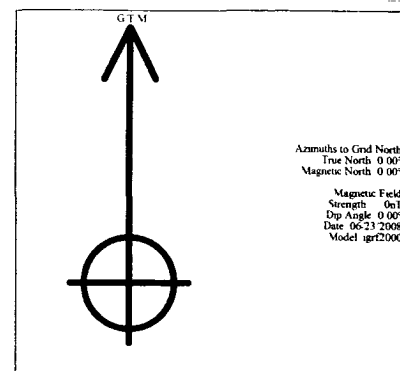
Survey

MD ft	Incl deg	Azim deg	TVD ft	VS ft	N/S ft	E/W ft	DLS deg/100ft	ClsD ft	ClsA deg
0.00	0.00	359.99	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.51	101.13	100.00	0.30	-0.09	0.44	0.51	0.45	101.13
200.00	1.11	126.52	199.99	1.49	-0.75	1.65	0.69	1.81	114.37
300.00	0.73	123.78	299.98	2.95	-1.68	2.96	0.38	3.40	119.56
400.00	0.41	20.73	399.97	3.30	-1.70	3.62	0.91	3.99	115.16
500.00	2.76	251.12	499.94	2.59	-2.14	1.46	3.04	2.60	145.66
600.00	3.16	261.74	599.80	1.05	-3.32	-3.54	0.68	4.85	226.87
700.00	1.65	253.98	699.71	-0.36	-4.11	-7.65	1.54	8.69	241.76
800.00	1.54	226.53	799.68	-0.42	-5.43	-10.01	0.76	11.39	241.51
900.00	1.69	211.13	899.64	0.57	-7.62	-11.75	0.46	14.00	237.04
1000.00	0.95	224.24	999.61	1.49	-9.48	-13.09	0.79	16.16	234.10
1100.00	0.62	280.40	1099.60	1.35	-9.97	-14.20	0.79	17.35	234.92
1200.00	1.15	230.37	1199.59	1.15	-10.51	-15.51	0.89	18.74	235.86
1300.00	1.87	282.86	1299.56	0.18	-10.79	-17.87	1.48	20.88	238.87
1400.00	4.80	302.85	1399.38	-4.68	-8.16	-22.98	3.11	24.38	250.45
1500.00	4.85	302.30	1499.03	-12.19	-3.63	-30.06	0.07	30.28	263.12
1600.00	4.20	323.84	1598.72	-19.60	1.59	-35.80	1.81	35.83	272.54
1700.00	4.26	348.84	1698.46	-26.75	8.19	-38.68	1.83	39.54	281.95
1800.00	3.83	352.39	1798.21	-33.32	15.14	-39.84	0.50	42.62	290.81
1900.00	4.14	353.57	1897.97	-39.69	22.04	-40.69	0.32	46.27	298.44
1982.00	3.79	351.19	1979.77	-44.91	27.66	-41.43	0.47	49.82	303.72

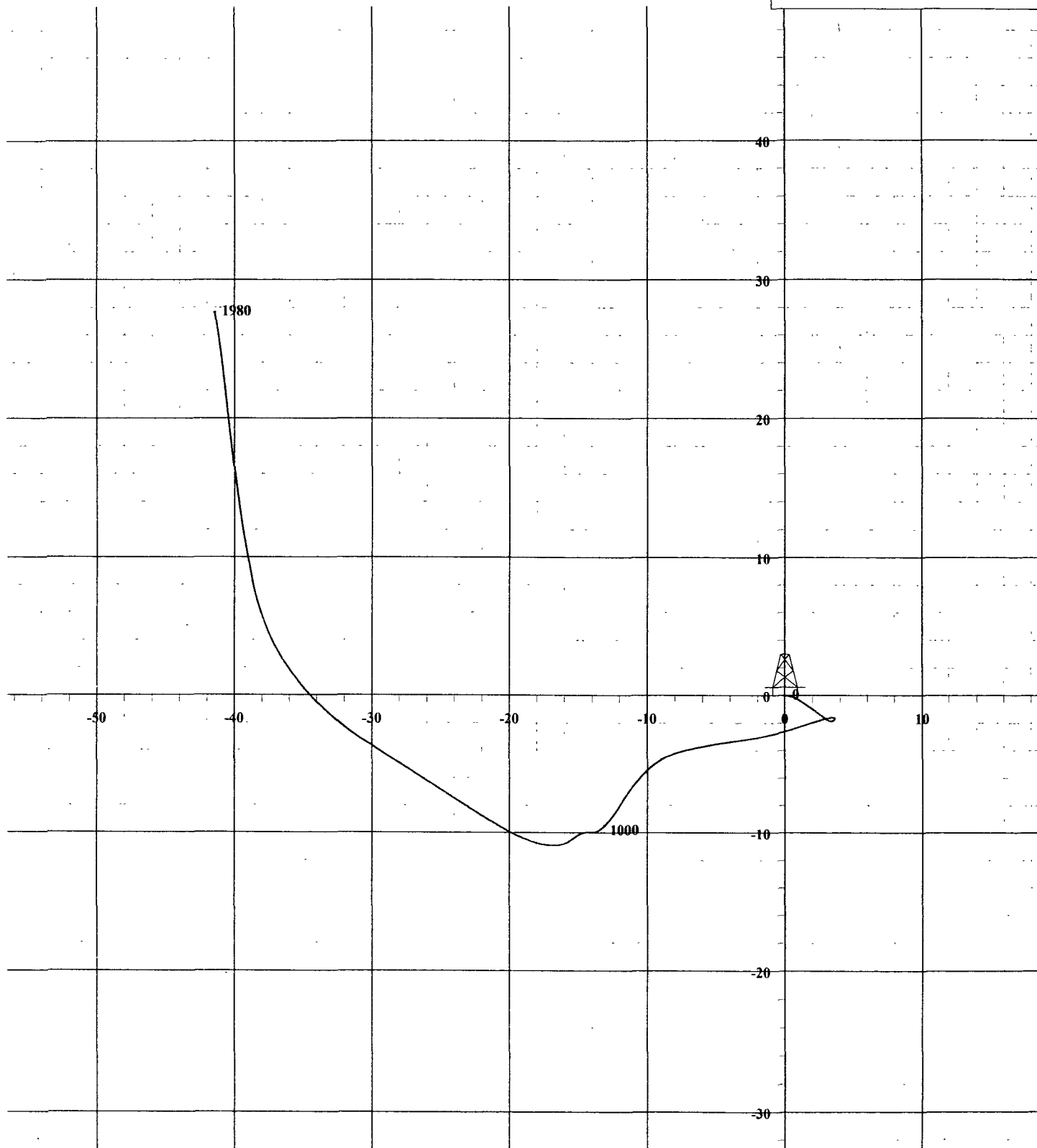


Scientific
Drilling

Field: White City Penn
Site: Eddy County, NM
Well: CK Federal #4
Wellpath: VH - Job #32K0508376
Survey: 05/25/08



South(-)/North(+) [10ft/in]



West(-)/East(+) [10ft/in]

DUAL LATEROLOG MICROGUARD

COMPANY		ENCORE OPERATING, L.P.					
WELL	CK FEDERAL No. 4						
FIELD	WHITE CITY PENN-GAS						
COUNTY	EDDY				STATE	NEW MEXICO	
API No.	30-015-35942					Other Services:	
Location	2540' FNL & 180' FWL					DSN/SDL BSAT SFTT	
Sect.	8	Twp	24S	Rge	26E		
Permanent Datum	GROUND LEVEL					Elev	K B 3741.5 ft
Log measured from	KELLY BUSHING						D F 3740.5 ft
Drilling measured from	KELLY BUSHING						G.L 3724.0 ft
Date	25-Jun-08						
Run No	ONE						
Depth - Driller	12350.0 ft						
Depth - Logger	12331.0 ft						
Bottom - Logged Interval	12329.0 ft						
Top - Logged Interval	1984.0 ft						
Casing - Driller	9.625 in	@	2032.0 ft		@		
Casing - Logger	1979.0 ft						
Bit Size	8.750 in		12.250 in	@	2032.00 ft	@	
Type Fluid in Hole	BRINE						
Density	Viscosity	10.3 cP	41.00 s/cP				
PH	Fluid Loss	8.50 pH	7.2 cpm				
Source of Sample	FLOWLINE						
Rm @ Meas. Temperature	0.06 ohmm	@	85.00 degF		@		
Rmf @ Meas. Temperature	0.05 ohmm	@	85.00 degF		@		
Rmc @ Meas. Temperature	0.08 ohmm	@	85.00 degF		@		
Source Rmf	Rmc	CALC	CALC				
Rm @ BHT	0.03 ohmm	@	196.0 degF		@		
Time Since Circulation	11.5 hr						
Time on Bottom	25-Jun-08 21:23						
Max Rec Temperature	196.0 degF	@	12334.0 ft		@		
Equipment	Location	798	HOBBS, NM				
Recorded By	MATTHEW GRAVES			RICK RAMSEY			
Witnessed By	BRENT JOHNSON						

HALLIBURTON

SPECTRAL DENSITY DUAL SPACED NEUTRON

ENCORE OPERATING, L.P. CK FEDERAL No. 4 WHITE CITY PENN-GAS EDDY NEW MEXICO		COMPANY ENCORE OPERATING, L.P.			
		WELL CK FEDERAL No. 4			
		FIELD WHITE CITY PENN-GAS			
		COUNTY EDDY		STATE NEW MEXICO	
		API No. 30-015-35942 Location 2540' FNL & 180' FWL			
COMPANY WELL FIELD COUNTY STATE		Sect. 8 Twp 24S Rge 26E			
Permanent Datum GROUND LEVEL Elev 3724 0 ft		Elev. K.B. 3741 5 ft			
Log measured from KELLY BUSHING 17 5 ft above perm Datum		D.F. 3740 5 ft			
Drilling measured from KELLY BUSHING		G.L. 3724 0 ft			
Date		25-Jun-08			
Run No		ONE			
Depth - Driller		12350.0 ft			
Depth - Logger		12331 0 ft			
Bottom - Logged Interval		12265.0 ft			
Top - Logged Interval		190.0 ft			
Casing - Driller		9 625 in @ 2032.0 ft		@	
Casing - Logger		1979.0 ft			
Bit Size		8 750 in		12.250 in @ 2032.00 ft	
Type Fluid in Hole		BRINE			
Density	Viscosity	10.3 ppg	41.00 s/qt		
PH	Fluid Loss	8.50 pH	7.2 cpm		
Source of Sample		FLOWLINE			
Rm @ Meas Temperature		0.06 ohmm @ 85.00 degF		@	
Rmf @ Meas Temperature		0.05 ohmm @ 85.00 degF		@	
Rmc @ Meas Temperature		0.08 ohmm @ 85.00 degF		@	
Source Rmf	Rmc	CALC	CALC		
Rm @ BHT		0.03 ohmm @ 196 0 degF		@	
Time Since Circulation		11 5 hr			
Time on Bottom		25-Jun-08 21 23			
Max Rec Temperature		196 0 degF @ 12334 0 ft		@	
Equipment	Location	798	HOBBBS, NM		
Recorded By		MATTHEW GRAVES		RICK RAMSEY	
Witnessed By		BRENT JOHNSON			



Encore
Operating, L.P.

Encore Operating, L.P.

Eddy Co., New Mexico (Nad 83)

CK Federal #4

CK Federal #4

S-Well #1

Survey: MWD Survey #1

Standard Survey Report

25 June, 2008





CUDD Drilling & Measurement Services

Survey Report



Company: Encore Operating, L.P.
Project: Eddy Co., New Mexico (Nad 83)
Site: CK Federal #4
Well: CK Federal #4
Wellbore: S-Well #1
Design: S-Well #1

Local Co-ordinate Reference: Well CK Federal #4
TVD Reference: WELL @ 3749 00ft (Original Well Elev)
MD Reference: WELL @ 3749 00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 21 Single User Db

Project: Eddy Co., New Mexico (Nad 83)

Map System: US State Plane 1983
Geo Datum: North American Datum 1983
Map Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

Site: CK Federal #4, Sec 8, T-24S, R-26E

Site Position: Northing: 448,127.45 ft Latitude: 32° 13' 55.121 N
From: Map Easting: 544,411.69 ft Longitude: 104° 19' 24.208 W
Position Uncertainty: 0.00 ft Slot Radius: " Grid Convergence: 0.01°

Well: CK Federal #4

Well Position: +N/-S 0.00 ft Northing: 448,127.45 ft Latitude: 32° 13' 55.121 N
+E/-W 0.00 ft Easting: 544,411.69 ft Longitude: 104° 19' 24.208 W
Position Uncertainty: 0.00 ft Wellhead Elevation: 3,749.00 ft Ground Level: 3,724.00 ft

Wellbore: S-Well #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	5/1/2008	8.29	60.15	48,868

Design: S-Well #1

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.00

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	149.38

Survey Program: Date: 6/25/2008

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
100.00	1,982.00	Gyro Survey #1 (S-Well #1)	SRG-GYRO-MS	surface readout gyro multishot
2,045.00	12,350.00	MWD Survey #1 (S-Well #1)	CUDD MWD	CUDD MWD - Standard

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,982.00	3.79	351.19	1,979.77	27.66	-41.43	-44.91	0.00	0.00	0.00
2,045.00	3.10	353.00	2,042.66	31.41	-41.96	-48.40	1.11	-1.10	2.87
First MWD Survey (8 3/4" Hole)									
2,138.00	2.30	2.60	2,135.55	35.77	-42.18	-52.26	0.99	-0.86	10.32
2,234.00	0.70	337.80	2,231.52	38.23	-42.32	-54.46	1.76	-1.67	-25.83
2,328.00	1.50	203.50	2,325.51	37.64	-43.02	-54.30	2.18	0.85	-142.87
2,422.00	2.90	194.30	2,419.44	34.20	-44.10	-51.90	1.53	1.49	-9.79
2,516.00	4.40	180.90	2,513.24	28.29	-44.75	-47.14	1.83	1.60	-14.26
2,610.00	5.10	170.30	2,606.92	20.57	-44.10	-40.16	1.19	0.74	-11.28
2,705.00	6.40	159.90	2,701.45	11.44	-41.57	-31.01	1.75	1.37	-10.95
2,799.00	7.60	153.50	2,794.74	0.95	-36.99	-19.66	1.52	1.28	-6.81
2,893.00	9.70	150.00	2,887.67	-11.47	-30.26	-5.54	2.30	2.23	-3.72



Company: Encore Operating, L.P.
Project: Eddy Co., New Mexico (Nad 83)
Site: CK Federal #4
Well: CK Federal #4
Wellbore: S-Well #1
Design: S-Well #1

Local Co-ordinate Reference: Well CK Federal #4
TVD Reference: WELL @ 3749 00ft (Original Well Elev)
MD Reference: WELL @ 3749 00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,987 00	11 20	146 30	2,980 11	-25 92	-21 23	11 49	1 75	1 60	-3 94
3,081 00	12 30	146 20	3,072 14	-41 84	-10 60	30 61	1 17	1 17	-0 11
3,175 00	13 30	145 70	3,163 80	-59 09	1 07	51 40	1 07	1 06	-0 53
3,270 00	13 90	144 20	3,256 14	-77 37	13 90	73 66	0 73	0 63	-1 58
3,363 00	13 90	141 90	3,346 42	-95 23	27 33	95 87	0 59	0 00	-2 47
3,458 00	13 60	142 00	3,438 69	-113 01	41 24	118 26	0 32	-0 32	0 11
3,552 00	13 70	142 50	3,530 04	-130 55	54 82	140 27	0 16	0 11	0 53
3,646 00	13 30	142 00	3,621 44	-147 90	68 26	162 04	0 44	-0 43	-0 53
3,740 00	13 30	143 20	3,712 92	-165 08	81 39	183 51	0 29	0 00	1 28
3,834 00	14 10	144 80	3,804 24	-183 09	94 47	205 68	0 94	0 85	1 70
3,928 00	14 20	147 40	3,895 39	-202 16	107 28	228 61	0 68	0 11	2 77
4,022 00	13 60	147 30	3,986 64	-221 17	119 46	251 18	0 64	-0 64	-0 11
4,116 00	13 80	149 40	4,077 97	-240 12	131 14	273 44	0 57	0 21	2 23
4,210 00	14 00	149 50	4,169 21	-259 57	142 62	296 02	0 21	0 21	0 11
4,304 00	13 40	148 40	4,260 54	-278 64	154 09	318 28	0 70	-0 64	-1 17
4,398 00	13 10	150 50	4,352 04	-297 19	165 05	339 82	0 60	-0 32	2 23
4,492 00	13 80	150 00	4,443 46	-316 17	175 90	361 68	0 75	0 74	-0 53
4,584 00	14 40	147 00	4,532 69	-335 27	187 62	384 08	1 03	0 65	-3 26
4,678 00	14 30	147 90	4,623 76	-354 91	200 15	407 37	0 26	-0 11	0 96
4,772 00	14 00	148 20	4,714 90	-374 41	212 31	430 34	0 33	-0 32	0 32
4,867 00	13 20	148 60	4,807 24	-393 43	224 02	452 67	0 85	-0 84	0 42
4,961 00	13 60	150 10	4,898 68	-412 17	235 12	474 46	0 56	0 43	1 60
5,055 00	14 70	150 80	4,989 83	-432 16	246 45	497 43	1 18	1 17	0 74
5,149 00	14 80	151 60	5,080 73	-453 14	257 98	521 35	0 24	0 11	0 85
5,243 00	14 00	148 10	5,171 78	-473 35	269 70	544 72	1 26	-0 85	-3 72
5,337 00	13 90	149 00	5,263 00	-492 68	281 52	567 37	0 25	-0 11	0 96
5,431 00	14 00	145 50	5,354 23	-511 73	293 78	590 01	0 90	0 11	-3 72
5,525 00	14 20	145 20	5,445 40	-530 57	306 80	612 85	0 23	0 21	-0 32
5,617 00	13 90	146 90	5,534 65	-549 09	319 27	635 15	0 55	-0 33	1 85
5,711 00	13 80	147 60	5,625 92	-568 02	331 44	657 63	0 21	-0 11	0 74
5,806 00	13 80	148 70	5,718 17	-587 26	343 40	680 29	0 28	0 00	1 16
5,900 00	14 30	148 40	5,809 36	-606 73	355 31	703 11	0 54	0 53	-0 32
5,994 00	13 80	148 00	5,900 55	-626 13	367 33	725 92	0 54	-0 53	-0 43
6,088 00	14 50	143 70	5,991 70	-645 12	380 24	748 84	1 34	0 74	-4 57
6,182 00	14 10	142 80	6,082 79	-663 72	394 13	771 92	0 49	-0 43	-0 96
6,282 00	14 80	151 30	6,179 63	-684 63	407 63	796 79	2 23	0 70	8 50
6,381 00	12 90	151 40	6,275 75	-705 43	418 99	820 48	1 92	-1 92	0 10
6,476 00	10 40	153 50	6,368 79	-722 41	427 90	839 63	2 67	-2 63	2 21
6,570 00	11 20	154 40	6,461 12	-738 24	435 63	857 19	0 87	0 85	0 96
6,664 00	12 90	151 00	6,553 05	-755 65	444 66	876 77	1 96	1 81	-3 62
6,757 00	12 40	146 10	6,643 79	-773 02	455 26	897 12	1 27	-0 54	-5 27
6,852 00	14 40	143 00	6,736 20	-790 92	468 06	919 04	2 24	2 11	-3 26
6,946 00	14 60	150 90	6,827 22	-810 61	480 86	942 50	2 11	0 21	8 40
7,040 00	13 30	153 20	6,918 44	-830 61	491 50	965 14	1 50	-1 38	2 45
7,134 00	15 60	154 00	7,009 47	-851 63	501 91	988 53	2 46	2 45	0 85
7,228 00	16 40	151 60	7,099 82	-874 66	513 77	1,014 39	1 10	0 85	-2 55
7,320 00	14 80	151 20	7,188 43	-896 39	525 60	1,039 11	1 74	-1 74	-0 43
7,415 00	14 50	149 00	7,280 34	-917 21	537 57	1,063 13	0 67	-0 32	-2 32
7,509 00	14 60	145 50	7,371 33	-937 06	550 35	1,086 72	0 94	0 11	-3 72
7,602 00	16 40	145 70	7,460 95	-957 57	564 39	1,111 52	1 94	1 94	0 22
7,696 00	16 60	149 30	7,551 08	-980 08	578 72	1,138 19	1 11	0 21	3 83
7,790 00	15 40	150 00	7,641 43	-1,002 44	591 82	1,164 10	1 29	-1 28	0 74
7,884 00	15 20	144 50	7,732 11	-1,023 28	605 21	1,188 86	1 56	-0 21	-5 85
7,979 00	12 50	146 30	7,824 34	-1,041 97	618 15	1,211 54	2 88	-2 84	1 89



Company: Encore Operating, L P
Project: Eddy Co., New Mexico (Nad 83)
Site: CK Federal #4
Well: CK Federal #4
Wellbore: S-Well #1
Design: S-Well #1

Local Co-ordinate Reference: Well CK Federal #4
TVD Reference: WELL @ 3749 00ft (Original Well Elev)
MD Reference: WELL @ 3749 00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003 21 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,073 00	11 80	143 40	7,916 23	-1,058 15	629 53	1,231 25	0 99	-0 74	-3 09
8,168 00	11 50	144 70	8,009 27	-1,073 68	640 79	1,250 35	0 42	-0 32	1 37
8,262 00	9 50	150 30	8,101 70	-1,088 07	650 05	1,267 45	2 39	-2 13	5 96
8,357 00	6 60	152 80	8,195 75	-1,099 74	656 43	1,280 74	3 07	-3 05	2 63
8,450 00	5 30	159 10	8,288 25	-1,108 50	660 41	1,290 31	1 56	-1 40	6 77
8,544 00	3 60	162 90	8,381 96	-1,115 38	662 82	1,297 46	1 83	-1 81	4 04
8,638 00	4 30	151 50	8,475 74	-1,121 30	665 37	1,303 85	1 12	0 74	-12 13
8,729 00	3 50	160 70	8,566 53	-1,126 92	667 92	1,309 98	1 11	-0 88	10 11
8,821 00	2 90	155 10	8,658 39	-1,131 68	669 83	1,315 05	0 73	-0 65	-6 09
8,916 00	2 60	155 40	8,753 28	-1,135 82	671 73	1,319 59	0 32	-0 32	0 32
9,010 00	1 90	138 40	8,847 21	-1,138 92	673 66	1,323 24	1 02	-0 74	-18 09
9,103 00	1 90	130 80	8,940 15	-1,141 08	675 85	1,326 21	0 27	0 00	-8 17
9,197 00	1 40	112 80	9,034 12	-1,142 54	678 09	1,328 61	0 76	-0 53	-19 15
9,290 00	0 10	244 20	9,127 11	-1,143 02	679 06	1,329 52	1 58	-1 40	141 29
9,381 00	0 40	311 00	9,218 11	-1,142 85	678 75	1,329 21	0 41	0 33	73 41
9,475 00	0 60	274 10	9,312 10	-1,142 60	678 01	1,328 62	0 39	0 21	-39 26
9,569 00	1 00	259 60	9,406 09	-1,142 71	676 71	1,328 05	0 47	0 43	-15 43
9,664 00	1 10	266 90	9,501 08	-1,142 91	674 99	1,327 34	0 18	0 11	7 68
9,757 00	0 90	271 70	9,594 06	-1,142 93	673 37	1,326 54	0 23	-0 22	5 16
9,852 00	1 00	312 50	9,689 05	-1,142 35	672 01	1,325 35	0 70	0 11	42 95
9,946 00	1 30	16 60	9,783 04	-1,140 78	671 71	1,323 84	1 33	0 32	68 19
10,040 00	1 10	65 40	9,877 02	-1,139 38	672 83	1,323 21	1 07	-0 21	51 91
10,134 00	0 40	263 80	9,971 01	-1,139 04	673 33	1,323 17	1 58	-0 74	-171 92
10,229 00	1 30	22 80	10,066 00	-1,138 08	673 42	1,322 39	1 62	0 95	125 26
10,324 00	0 80	89 10	10,160 99	-1,137 08	674 50	1,322 08	1 29	-0 53	69 79
10,417 00	0 90	66 60	10,253 98	-1,136 78	675 82	1,322 49	0 37	0 11	-24 19
10,512 00	0 80	108 80	10,348 97	-1,136 69	677 13	1,323 09	0 65	-0 11	44 42
10,605 00	1 30	120 60	10,441 96	-1,137 44	678 65	1,324 51	0 58	0 54	12 69
10,699 00	0 70	51 70	10,535 94	-1,137 63	680 02	1,325 36	1 31	-0 64	-73 30
10,795 00	0 40	78 30	10,631 94	-1,137 20	680 81	1,325 39	0 40	-0 31	27 71
10,887 00	0 60	112 30	10,723 94	-1,137 31	681 57	1,325 88	0 38	0 22	36 96
Last MWD Survey									
11,083 00	1 00	257 40	10,919 93	-1,138 08	680 85	1,326 17	0 78	0 20	74 03
First MultiShot Single Shot									
11,209 00	1 00	250 70	11,045 91	-1,138 68	678 74	1,325 62	0 09	0 00	-5 32
11,301 00	1 40	254 00	11,137 89	-1,139 25	676 90	1,325 17	0 44	0 43	3 59
11,394 00	1 40	244 90	11,230 86	-1,140 05	674 78	1,324 78	0 24	0 00	-9 78
11,488 00	1 40	245 50	11,324 83	-1,141 01	672 69	1,324 55	0 02	0 00	0 64
11,582 00	1 70	260 70	11,418 80	-1,141 71	670 27	1,323 92	0 54	0 32	16 17
Last MultiShot Single Shot									
11,666 00	0 70	253 40	11,502 78	-1,142 06	668 55	1,323 34	1 20	-1 19	-8 69
First MWD Survey									
11,761 00	0 80	125 90	11,597 78	-1,142 62	668 53	1,323 81	1 42	0 11	-134 21
11,854 00	1 80	106 30	11,690 75	-1,143 41	670 46	1,325 47	1 16	1 08	-21 08
11,948 00	1 70	105 90	11,784 71	-1,144 20	673 22	1,327 56	0 11	-0 11	-0 43
12,042 00	1 70	109 90	11,878 67	-1,145 06	675 87	1,329 65	0 13	0 00	4 26
12,136 00	1 80	116 60	11,972 62	-1,146 20	678 50	1,331 96	0 24	0 11	7 13
12,229 00	1 80	104 20	12,065 58	-1,147 21	681 22	1,334 22	0 42	0 00	-13 33
Last MWD Survey (8 3/4" Hole)									
12,350 00	1 80	104 20	12,186 52	-1,148 14	684 91	1,336 90	0 00	0 00	0 00
Proj to Bit									



Company:	Encore Operating, L.P.	Local Co-ordinate Reference:	Well CK Federal #4
Project:	Eddy Co., New Mexico (Nad 83)	TVD Reference:	WELL @ 3749 00ft (Original Well Elev)
Site:	CK Federal #4	MD Reference:	WELL @ 3749 00ft (Original Well Elev)
Well:	CK Federal #4	North Reference:	Grid
Wellbore:	S-Well #1	Survey Calculation Method:	Minimum Curvature
Design:	S-Well #1	Database:	EDM 2003 21 Single User Db

Survey Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
2,045 00	2,042 66	31 41	-41 96	First MWD Survey (8 3/4" Hole)
10,887 00	10,723 94	-1,137 31	681 57	Last MWD Survey
11,083 00	10,919 93	-1,138 08	680 85	First MultiShot Single Shot
11,582 00	11,418 80	-1,141 71	670 27	Last MultiShot Single Shot
11,666 00	11,502 78	-1,142 06	668 55	First MWD Survey
12,229 00	12,065 58	-1,147 21	681 22	Last MWD Survey (8 3/4" Hole)
12,350 00	12,186 52	-1,148 14	684 91	Proj to Bit

Checked By _____

Approved By: _____

Date: _____