Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MAR 12 2012
Farmington Field Office
Bureau of Land Management

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.
NM-76870

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.
Meadows I08-3014 01H

2. Name of Operator
Encana Oil & Gas (USA) Inc.

9. API Well No.
30-045-35320

3a. Address
370 17th Street, Suite 1700
Denver, CO 80202

3b. Phone No. *(include area code)*
720-876-3989

10. Field and Pool or Exploratory Area
Wildcat (Gallup)

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
SHL: 1599' FSL and 292' FEL Section 8, T30N, R14W
BHL: 1599' FSL and 330' FWL Section 8, T30N, R14W

11. Country or Parish, State
San Juan, New Mexico

12. CHECK THE 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)	☐ Water Shut-Off
	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☑ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
☐ Final Abandonment Notice	☐ 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 duration thereof If the proposal is to deepen directionally or recomplete 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 recompletion 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.)

Encana Oil & Gas (USA) Inc. (Encana) would like to amend the spacing unit dedicated to the Meadows I08-3014 01H oil well from 320 acres to 160 acres. This change is due to revised New Mexico Oil and Gas Regulations that became effective on February 15, 2012 that limit project areas to contiguous spacing units penetrated by the well bore.

As a result of the project area dedication, Encana has revised the well bore to satisfy setback requirements. Revising the well bore results in the following changes:

* Plug A of the vertical hole needs to be expanded to 100' above the Graneros formation top *

Proposed Wellbore TD is 5111' TVD/9585' MD (original approval was 5108' TVD/9519' MD)
Proposed KOP is 4490' TVD/MD (original approval was 4571' TVD/MD)
Proposed lateral is 4101' (original approval was 4043')
Proposed Gallup Penetration Point is 321' FEL (original approval was 400' FEL) and proposed top of completed interval is 623' FEL.

A revised C-102, 10-Point Drilling Plan, Wellbore Schematic, and Directional Plans are attached.

CONDITIONS OF APPROVAL

Adhere to previously issued stipulations

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

14 I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)*
Brenda R. Linster

Title Regulatory Advisor

RCVD APR 11 '12
OIL CONS. DIV.
DIST. 3

Signature Brenda R. Linster

Date 03.08.12

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by Shea C. Valdez

Title PE

Date 4/2/12

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 FFO

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 Comply w. 19.15.16.10.62

District I
1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011

Submit one copy to Appropriate District Office

RECEIVED
MAR 12 2012
Farmington Field Office
Bureau of Land Management

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
		WILDCAT 30N14W8I; GALLUP (O)

[4] Property Code	[5] Property Name	[6] Well Number
	MEADOWS I08-3014	01H

[7] OGRID No.	[8] Operator Name	[9] Elevation
282327	ENCANA OIL & GAS (USA) INC.	5544'

[10] Surface Location

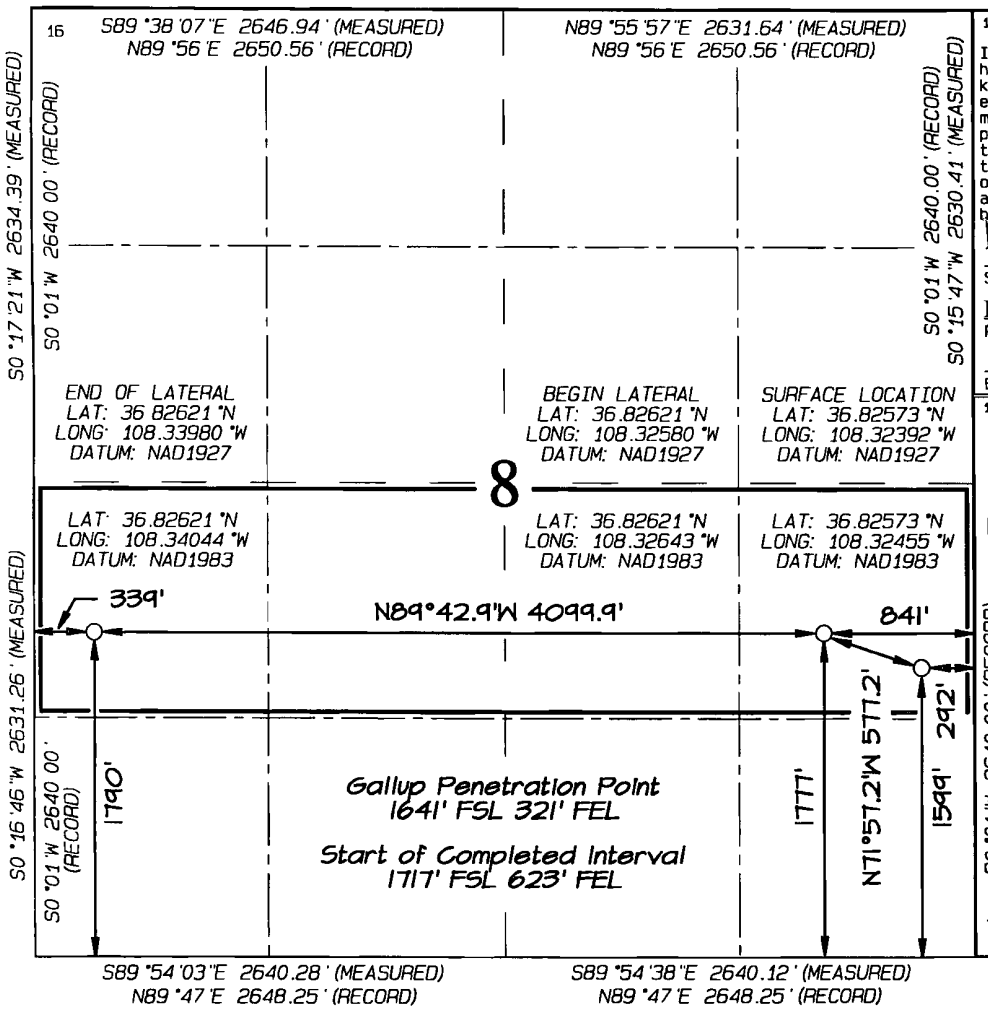
UL or lot no	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	8	30N	14W		1599	SOUTH	292	EAST	SAN JUAN

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	8	30N	14W		1790	SOUTH	339	WEST	SAN JUAN

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
160.0 Acres (N/2 S/2) Section 8			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom-hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Brenda R. Linster 03-08-12
Signature Date

Brenda R. Linster, Regulatory Advisor
Printed Name

brenda.linster@encana.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Revised: FEBRUARY 24, 2012
Survey Date: OCTOBER 21, 2011

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

Meadows I08-3014 01H
SHL: SENESE Section 8, T30N, R14W
1599 FSL and 292 FEL
BHL: SWNWSW Section 8, T30N, R14W
1599 FSL and 330 FWL
San Juan County, New Mexico
Lease Number: NM-16507 and NM-76870

Encana Oil & Gas (USA) Inc.
Drilling Plan

1. ESTIMATED TOPS OF GEOLOGICAL MARKERS (TVD)

The estimated tops of important geologic markers are as follows:

Formation	Depth (TVD)
Kirtland	Surface
Fruitland Coal	656'
Pictured Cliffs	1089'
Lewis	1271'
Cliffhouse	2634'
Menefee	2774'
Point Lookout	3529'
Mancos	3894'
Gallup	4872'
Upper Carlile	5289'
Juana Lopez	5309'
Lower Carlile	5392'
Greenhorn	5640'
Graneros	5692'
Dakota	5739'
Morrison	5986'

The referenced surface elevation is 5544', KB 5557'

2. ESTIMATED DEPTH OF POTENTIAL WATER, OIL, GAS, & OTHER MINERAL BEARING FORMATIONS

Substance	Formation	Depth (TVD)
Gas	Fruitland Coal	656'
Gas	Pictured Cliffs	1089'
Gas	Cliffhouse	2634'
Gas	Point Lookout	3529'
Oil/Gas	Mancos	3894'
Oil/Gas	Dakota	5739'

All shows of fresh water and minerals will be reported and protected.

3. PRESSURE CONTROL

a) Pressure control equipment and configuration will be designed to meet 2M standards.
b) Working pressure on rams and BOPE will be 3,000 psi
c) Function test and visual inspection of the BOP will be conducted daily and noted in the IADC Daily Drilling Report.
d) The Annular BOP will be pressure tested to a minimum of 50 percent of its rated working pressure.
e) Blind and Pipe Rams/BOP will be tested against a test plug to either 70 percent of the casings internal yield pressure or 100 percent of rated working pressure.

f) Pressure tests are required before drilling out from under all casing strings set and cemented in place.
g) BOP controls must be installed prior to drilling the surface casing plug and will remain in use until the well is completed or abandoned.
h) BOP testing procedures and testing frequency will conform to Onshore Order No. 2.
i) BOP remote controls shall be located on the rig floor at a location readily accessible to the driller. Master controls shall be on the ground at the accumulator and shall have the capability to function all preventers.
j) The kill line shall be 2-inch minimum and contain two kill line valves, one of which shall be a check valve.
k) The choke line shall be a 2-inch minimum and contain two choke line valves (2-inch minimum).
l) The choke and manifold shall contain two adjustable chokes.
m) Hand wheels shall be installed on all ram preventers.
n) Safety valves and wrenches (with subs for drill string connections) shall be available on the rig floor at all times.
o) Inside BOP or float sub shall also be available on the rig floor at all times.

Proposed BOP and choke manifold arrangements are attached.

4. CASING & CEMENTING PROGRAM

The proposed casing and cementing program has been designed to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use. The casing setting depth shall be calculated to position the casing seat opposite a competent formation which will contain the maximum pressure to which it will be exposed during normal drilling operations. All indications of useable water shall be reported.

a) The proposed casing design is as follows:

Casing	Depth	Hole Size	Csg Size	Weight	Grade
Conductor	0-60'	26"	20"	94#	H40, STC New
Surface	0'-500'	17 1/2"	13 3/8"	48#	H40, STC New
Intermediate	0'-4300'	12 1/4"	9 5/8"	40#	J55, STC New
Production Liner	4100'-9585'	8 1/2"	5 1/2"	17#	B80*, LTC New

Casing String				Casing Strength Properties			Minimum Design Factors		
Size	Weight (lb/ft)	Grade	Connection	Collapse (psi)	Burst (psi)	Tensile (1000lb)	Collapse	Burst	Tension
13 3/8"	48	H40	STC	740	1730	322	1.125	1.1	1.5
9 5/8"	40	J55	STC	2570	3950	452	1.125	1.1	1.5
5 1/2"	17	B80	LTC	6290	7740	320	1.125	1.1	1.5

*B80 pipe specifications are attached

Casing design is subject to revision based on geologic conditions encountered.

All casing strings below the conductor shall be pressure tested to 0.22 psi per foot of casing string length or 1,500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If pressure declines more than 10 percent in 30 minutes, corrective action shall be taken.

Meadows I08-3014 01H
SHL: SENESE Section 8, T30N, R14W
1599 FSL and 292 FEL
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1599 FSL and 330 FWL
San Juan County, New Mexico
Lease Number: NM-16507 and NM-76870

b) The proposed cementing program is as follows:

Top plugs shall be used to reduce contamination of cement by displacement fluid. A bottom plug or other acceptable technique, such as a pre-flush fluid, inner string cement method, etc. shall be utilized to help isolate the cement from contamination by the mud fluid being displaced ahead of the cement slurry.

Casing	Depth	Cement Volume (sacks)	Cement Type&Yield	Designed TOC	Centralizers
Conductor	60'	80sk	Redi-mix Construction Grade Cement	Surface	None
Surface	500'	291sk	Type III Cement + 1% CaCl + 0.25lb/sk Cello Flake + 0.2% FL, 14.6ppg, 1.38cuf/sk	Surface	1 per joint on bottom 3 joints
Intermediate	4300'	50% open hole excess Lead:835sk Tail: 182sk	Lead: PremLite + 3% CaCl + 0.25lb/sk CelloFlake + 5lb/sk LCM, 12.1ppg 2.13cuft/sk Tail: Type III Cmt + 1% CaCl + 0.25lb/sk Cello Flake 14.5ppg 1.38cuft/sk	Surface	1 per joint for bottom 3 joints, 1 every 3 joints for remaining joints
Production Liner*	4100'-9585'	None – External casing packers	N/A	N/A	N/A

*Production liner clarification: Utilizing external swell casing packer system for zonal isolation will not use cement in the production liner.

Actual volumes will be calculated and determined by conditions onsite. All cement slurries will meet or exceed minimum BLM and New Mexico Oil Conservation Division requirements. Slurries used will be the slurries listed above or equivalent slurries depending on service provider selected. Cement yields may change depending on slurries selected.

All waiting on cement times shall be a minimum of 8 hours or adequate to achieve a minimum of 500 psi compressive strength at the casing shoe prior to drilling out.

Comply w/ NMAC 19.15.16.10.G.2

5. WELL PLAN & DIRECTIONAL DRILLING PROGRAM

The proposed well will be drilled in two phases. A pilot hole will be drilled in the first phase, followed by kicking off a horizontal lateral in the existing wellbore in the second phase. The intent of drilling a pilot hole is to obtain open hole log and core data. The intent of the second phase of the well is to plug back the pilot hole with cement to the kick off point. After plugging back, the plan is to drill a horizontal lateral from the kick off point in the existing wellbore to the proposed bottom hole location.

Directional plans are attached.

Meadows I08-3014 01H
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Well Phase	Description	Proposed Depth (TVD/MD)	Formation
1	Vertical Pilot Hole	6086'/6086'	Morrison
2	Horizontal Lateral	5111'/9585'	Gallup

Proposed Plug Back Procedure:

TOPS:	TVD
KOP	4490'
Graneros Shale	5692'
Dakota	5739'

Set 2 cement plugs in 8 ½" hole
Plug A: Bottom plug over Dakota
Plug B: Kick plug at KOP

Plug A
1. TIH to TD of vertical pilot hole at 6086'
2. Spot 400' cement plug from 5686'- 6086'
    a. 135sx of Class A cement (1.18ft^3/sk yield)
    b. Spot tuned spacer
3. Pull uphole and reverse out
4. TIH and tag plug, proceed when cement is solid
5. Fill hole and move uphole to spot kick plug

Plug B
1. Spot 300' kick plug from 4390' – 4690'
    a. 91sx of Class A cement with salt (1.3ft^3/sk yield)
    b. Spot tuned spacer
2. Pull uphole and reverse out
3. Pump bottoms up 2 times, pull uphole
4. Tag plug, drill ahead to KOP when cement is solid

6. DRILLING FLUIDS PROGRAM

a) Phase 1, Vertical Pilot Hole:

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
26"	0-60'	Fresh Water	8.3-9.2	38-100	4-28
17 1/2"	0-500'	Fresh Water	8.4-8.6	60-70	NC
12 1/4"	500-4300'	Fresh Water LSND	8.5-8.8	40-50	8-10
8 1/2"	4300-6086'	Fresh Water LSND	8.5-8.8	40-50	8-10

b) Phase 2, Kick off to Horizontal Lateral:

Hole Size (in)	TVD (ft)	Mud Type	Density (lb/gal)	Viscosity (sec/qt)	Fluid Loss (cc)
8 1/2"	4490' (KOP)-9585'	Synthetic Oil Based Mud	8.6-9.0	15-25	<15

c) There will be sufficient mud on location to control a blowout should one occur. Mud flow and volume will be monitored both visually and with electronic pit volume totalizers. Mud tests shall be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtration, and pH.

d) A closed-loop system will be used to recover drilling fluid and dry cuttings in both phases of the well and on all hole intervals, including fresh water and oil-based operations. Above-ground tanks will be utilized to hold cuttings and fluids for rig operations. A frac tank will be on location to store fresh water. Waste will be disposed of properly at an EPA-approved hazardous waste facility. Fresh water cuttings will be disposed of at Basin Disposal, Inc. and/or Industrial Ecosystems, Inc. The location will be lined in accordance with the Surface Use Plan of Operations.

7. TESTING, CORING and LOGGING

a) Drill Stem Testing – None anticipated
b) Coring – Obtain core starting in the Mancos formation. Specific cored intervals will be determined real time by onsite geologists.
c) Mud Logging – Mud loggers will be on location from Surface Casing to TD.
d) Logging – See Below

Open Hole:
Triple combo with Spectral Gamma TD to surface casing
Specialty logs will be decided real time by onsite geologists

Cased Hole:
CBL/CCL/GR/VDL will be run as needed for perforating control

8. ABNORMAL PRESSURES & HYDROGEN SULFIDE

The anticipated bottom hole pressure is +/- 2,848 psi based on a 9.0 ppg at 6086' TVD of the vertical pilot hole. No abnormal pressure or temperatures are anticipated.

No hydrogen sulfide gas is anticipated, however, if H_2S is encountered, the guidelines in Onshore Order No. 6 will be followed.

9. ANTICIPATED START DATE AND DURATION OF OPERATIONS

Drilling is estimated to commence on March 1, 2012. It is anticipated that completion operations will begin within 30 days after the well has been drilled depending on fracture treatment schedules with various pumping service companies.

It is anticipated that the drilling of this well will take approximately 45 days.

10. NOTIFICATION REQUIREMENTS & OTHER ITEMS

a) The spud date will be reported orally to the Authorized Officer within 24 hours prior to spudding. Written notification via a Sundry Notice (Form 3160-5) will be submitted to the Authorized Officer within 5 days of spudding.

b) The Authorized Officer will be notified at least 24 hours in advance of BOP pressure tests.

c) The Authorized Officer will be notified at least 24 hours in advance of running and cementing casing strings.

d) Minor Events will be reported on the Monthly Report of Operations and Production (Form 3160-6). All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in Notice to Lessee (NTL-3A) will be reported to the Authorized Officer. Major events will be reported verbally within 24 hours, followed by a written report within 15 days. Other than Major Events will be reported in writing within 15 days.

\\Encana.com\dnvshared\New_Ventures\Future Opportunity Exploration (FOE)\San Juan\1-WELLFILES\Meadows Block\Meadows I08-3014 01H\Regulatory\Regulatory Reports\Drafts\Meadows I08-3014 01H Wellbore Diagram.xls

LOC: **Sec 36-T30N-R14W**
County: **San Juan**
WELL: **Meadows I08-3014 01H**

Encana Natural Gas

WELL SUMMARY

encana natural gas

ENG: J. Fox/ A.
RIG:
GLE: 5540
RKBE: 5598

3/7/12

MWD LWD	OPEN HOLE LOGGING	FORM	DEPTH TVD	DEPTH MD	HOLE SIZE	CASING SPECS	MW MUD TYPE	DEVIATION INFORMATION
			60	60'	**26**	**20" 94#** 80sx Type I Neat 48 8ppg cmt	**Fresh wtr** 8 3-9 2 Vis 38-100 YP 4-28 FL 4-28	
Surveys After csg is run	None Mud logger onsite at spud	Kirtland Shale	**500**	**500**	**17 1/2**	**13 3/8" 48ppf H40 STC** 291sk Type III Cement + 1%CaCl +0 25lb/sk CelloFlake + 0 2% FL, 14.6ppg 1 38cuft/sk TOC @ sfc	**Fresh wtr** 8 4-8 6 Vis 40-50 YP 25-35	Vertical <1°
Surveys every 500'	Triple combo	Fruitland Coal Pictured Cliffs Ss Lewis Shale Cliffhouse Ss Menefee Fn Point Lookout Ss Mancos Sh	656 1089 1271 2634 2774 3529 3894 **4300**	**4300**	**12 1/4**	**9 5/8" 40ppf J55 STC** 50% OH Excess Lead 835sx PremLite Cmt w/3% CaCl + 0.25lb/sk Cello Flake + 5lb/sk LCM-1 12 1ppg 2 13cuft/sk + tail 182sx Type III Cmt 1% CaCl 14 5ppg 1 38cuft/sk Permit TOC @ surface	**Fresh Wtr** 8 5-8 8 Vis 40-50 YP 10-12 FL 8-10	Vertical <1°
Surveys every 500' Gyro at CP MWD Gamma Directional	High Def DLL Microlaterlog WTS comp Neut WTS ZDL with PE Caliper Digital GR DAL	**KICK OFF PT** Gallup Top horz target Prodelta Gallup Upper Carlile Shale Juana Lopez Sh Lower Carlile Sh Greenhorn LS Graneros Sh Dakota Grp Morrison **Pilot Hole TD**	4490 4872 **5146** 5214 5289 5309 5392 5640 5692 5739 5986 **6086**	**5484**	**8 1/2 w/opt 7 7/8 in lateral**	**5 1/2" 17ppf I/L80 LTC** Running external swellable csg packers for isolation of prod string 4101' Lateral	Fresh Wtr LSND-in pilot 8 5-8 8 Switch to OBM at K/O 8 6-9 0 8 6-9 0 OBM	KOP 4490 10 deg/100' 5deg updip 5111'TVD TD = 9,585' MD

NOTES:

1) Drill with 26" bit to 60', set 20" 94# conductor pipe
2) Drill surface to 500', R&C 13 3/8" casing
3) N/U BOP and surface equipment
4) Drill to 4300' , 12 1/4" hole size
5) Run OH logs, R&C 9 5/8" casing, circ cmt 50' into sur csg shoe
6) Drill 8 1/2" hole to core point, core Gallup & possibly Dakota, confirm coring details
7) RIH with 8 1/2" bit to drill 100' rathole, run OH logs
8) Plugback to 4300' with cmt
9) PU directional tools and K/O cmt plug and start curve at 10deg/100' build rate
10) Drill curve to 20-30deg then swtich over to OBM system
11) If drill curve without hole issues, omit contingent csg string and proceed with 8 1/2 bit to landing depth
12) If need bit trip, option to switch to 7 7/8 bit for remainder of well
13) Land at 90deg, drill 4101' lateral to 9,585', run 5 1/2" liner with external swellable csg packers

ENCANA

Project: San Juan Co, NM
Site: S8-T30N-R14W
Well: Meadows I08-3014 01H
Wellbore: HZ
Design: Plan #6

CATHEDRAL

SECTION DETAILS

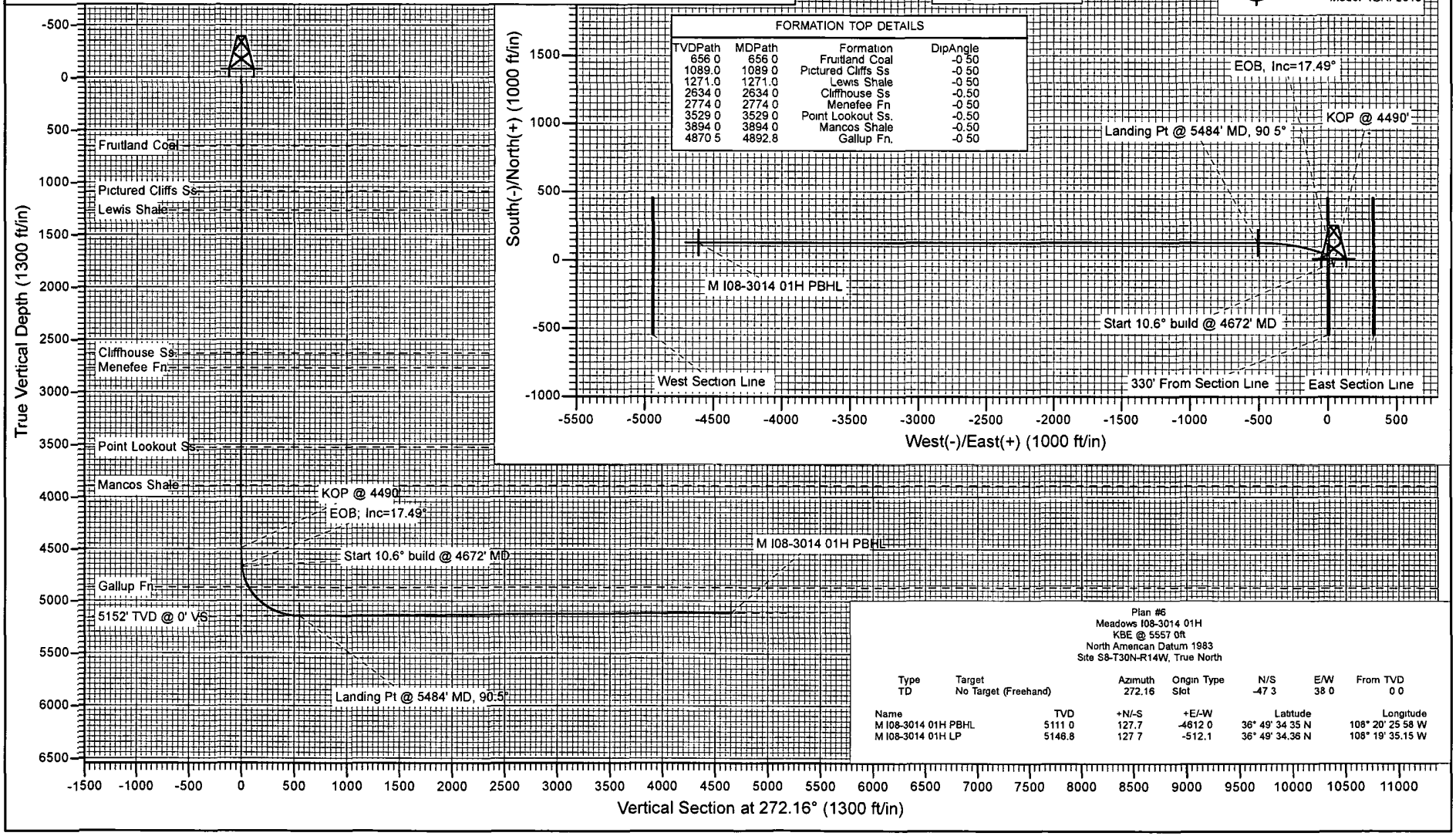
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	-47.3	38.0	0.00	0.00	0.0	
2	4490.0	0.00	0.00	4490.0	-47.3	38.0	0.00	0.00	0.0	
3	4664.9	17.49	345.68	4662.2	-21.7	31.5	10.00	345.68	7.5	
4	4672.1	17.49	345.68	4669.1	-19.6	31.0	0.00	0.00	8.1	
5	5484.8	90.50	270.00	5146.8	127.7	-512.1	10.61	-76.17	556.3	
6	9584.8	90.50	270.00	5111.0	127.7	-4612.0	0.00	0.00	4653.3	M I08-3014 01H PBHL

Prop Surface Hole Location
Meadows I08-3014 01H
1599' FSL, 292' FEL
Lat 36° 49' 32.63 N
Long 108° 19' 28 38 W

T M
Azimuths to True North
Magnetic North 10.06°
Magnetic Field
Strength 50649.0snT
Dip Angle 63 41°
Date: 2/8/2012
Model IGRF2010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle
656 0	656 0	Fruitland Coal	-0 50
1089.0	1089 0	Pictured Cliffs Ss	-0 50
1271.0	1271.0	Lewis Shale	-0 50
2634 0	2634 0	Cliffhouse Ss	-0.50
2774 0	2774 0	Menefee Fn	-0 50
3529 0	3529 0	Point Lookout Ss.	-0.50
3894 0	3894 0	Mancos Shale	-0.50
4870 5	4892.8	Gallup Fn.	-0 50



Plan #6
Meadows I08-3014 01H
KBE @ 5557 0ft
North American Datum 1983
Site S8-T30N-R14W, True North

Type	Target	Azimuth	Origin Type	N/S	E/W	From TVD
TD	No Target (Freehand)	272.16	Slot	-47 3	38 0	0 0

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
M I08-3014 01H PBHL	5111 0	127.7	-4612 0	36° 49' 34 35 N	108° 20' 25 58 W
M I08-3014 01H LP	5146.8	127 7	-512.1	36° 49' 34.36 N	108° 19' 35.15 W

Planning Report

Database:	USA EDM 5000 Multi Users DB	**Local Co-ordinate Reference:**	Site S8-T30N-R14W
Company:	EnCana Oil & Gas (USA) Inc	**TVD Reference:**	KBE @ 5557 0ft
Project:	San Juan Co, NM	**MD Reference:**	KBE @ 5557 0ft
Site:	S8-T30N-R14W	**North Reference:**	True
Well:	Meadows I08-3014 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #6		

Project	San Juan Co, NM		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	S8-T30N-R14W				
Site Position:		**Northing:**	2,120,308 69 ft	**Latitude:**	36° 49' 33 10 N
From:	Lat/Long	**Easting:**	2,579,292 57 ft	**Longitude:**	108° 19' 28 85 W
Position Uncertainty:	0 0 ft	**Slot Radius:**	13 200 in	**Grid Convergence:**	-0 29 °

Well	Meadows I08-3014 01H				
Well Position	**+N/-S** -47 3 ft	**Northing:**	2,120,261 17 ft	**Latitude:**	36° 49' 32 63 N
	+E/-W 38 0 ft	**Easting:**	2,579,330.38 ft	**Longitude:**	108° 19' 28 38 W
Position Uncertainty	0 0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	5,544.0 ft

Wellbore	HZ			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2010	2/8/2012	10 06	63 41	50,649

Design	Plan #6			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0 0

Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**
	0.0	-47 3	38 0	272 16

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0 00	0 0	-47.3	38 0	0.00	0 00	0 00	0 00	
4,490 0	0 00	0 00	4,490 0	-47.3	38 0	0 00	0.00	0 00	0 00	
4,664.9	17 49	345 68	4,662.2	-21.7	31 5	10 00	10 00	0 00	345 68	
4,672.1	17 49	345.68	4,669.1	-19 6	31 0	0 00	0 00	0.00	0 00	
5,484 8	90.50	270 00	5,146 8	127 7	-512 1	10 61	8.98	-9 31	-76 17	
9,584 8	90 50	270 00	5,111 0	127.7	-4,612.0	0 00	0 00	0 00	0.00	M I08-3014 01H PBH

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Site:	S8-T30N-R14W	**North Reference:**	True
Well:	Meadows 108-3014 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #6		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
0 0	0 00	0 00	0 0	-47 3	38.0	0 0	0.00	0 00	
100 0	0 00	0 00	100 0	-47.3	38 0	0 0	0.00	0 00	
200 0	0 00	0 00	200.0	-47 3	38.0	0 0	0.00	0 00	
300 0	0 00	0.00	300 0	-47 3	38.0	0 0	0.00	0.00	
400 0	0 00	0.00	400 0	-47.3	38.0	0 0	0.00	0 00	
500.0	0 00	0.00	500 0	-47 3	38 0	0.0	0 00	0.00	
600 0	0 00	0.00	600 0	-47 3	38.0	0 0	0.00	0 00	
656.0	0 00	0.00	656 0	-47.3	38.0	0 0	0.00	0 00	Fruitland Coal
700 0	0.00	0.00	700.0	-47.3	38 0	0.0	0.00	0 00	
800.0	0 00	0.00	800 0	-47.3	38 0	0.0	0 00	0.00	
900 0	0 00	0 00	900 0	-47.3	38 0	0 0	0 00	0 00	
1,000 0	0.00	0.00	1,000.0	-47 3	38.0	0 0	0.00	0 00	
1,089 0	0 00	0 00	1,089.0	-47 3	38.0	0 0	0.00	0.00	Pictured Cliffs Ss.
1,100 0	0.00	0.00	1,100.0	-47.3	38 0	0 0	0.00	0 00	
1,200 0	0.00	0 00	1,200.0	-47 3	38.0	0 0	0 00	0 00	
1,271 0	0 00	0.00	1,271.0	-47 3	38.0	0 0	0.00	0.00	Lewis Shale
1,300.0	0 00	0.00	1,300.0	-47.3	38.0	0 0	0 00	0 00	
1,400.0	0 00	0.00	1,400.0	-47.3	38.0	0 0	0.00	0 00	
1,500.0	0 00	0.00	1,500.0	-47.3	38.0	0 0	0.00	0.00	
1,600.0	0 00	0.00	1,600.0	-47.3	38.0	0 0	0.00	0 00	
1,700 0	0.00	0.00	1,700.0	-47 3	38.0	0 0	0 00	0 00	
1,800.0	0.00	0.00	1,800.0	-47.3	38.0	0 0	0.00	0.00	
1,900.0	0.00	0.00	1,900.0	-47.3	38.0	0 0	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	-47.3	38.0	0 0	0 00	0 00	
2,100.0	0.00	0 00	2,100.0	-47.3	38.0	0.0	0 00	0 00	
2,200.0	0 00	0.00	2,200.0	-47.3	38.0	0 0	0.00	0 00	
2,300 0	0 00	0 00	2,300.0	-47.3	38.0	0.0	0.00	0.00	
2,400.0	0.00	0 00	2,400.0	-47 3	38.0	0 0	0 00	0.00	
2,500 0	0.00	0 00	2,500.0	-47.3	38.0	0 0	0 00	0 00	
2,600 0	0.00	0 00	2,600.0	-47 3	38.0	0.0	0 00	0.00	
2,634 0	0 00	0 00	2,634.0	-47 3	38.0	0 0	0.00	0 00	Cliffhouse Ss
2,700 0	0 00	0.00	2,700.0	-47 3	38.0	0 0	0.00	0 00	
2,774 0	0 00	0 00	2,774.0	-47 3	38.0	0 0	0 00	0 00	Menefee Fn.
2,800 0	0 00	0.00	2,800.0	-47 3	38.0	0 0	0 00	0 00	
2,900 0	0.00	0 00	2,900 0	-47 3	38 0	0 0	0 00	0 00	
3,000 0	0.00	0.00	3,000.0	-47 3	38.0	0 0	0 00	0 00	
3,100.0	0 00	0 00	3,100 0	-47.3	38 0	0 0	0 00	0 00	
3,200.0	0 00	0 00	3,200 0	-47 3	38.0	0 0	0.00	0 00	
3,300.0	0 00	0.00	3,300 0	-47 3	38 0	0 0	0 00	0.00	
3,400.0	0 00	0 00	3,400.0	-47 3	38.0	0 0	0 00	0 00	
3,500 0	0 00	0.00	3,500 0	-47 3	38 0	0 0	0 00	0.00	
3,529 0	0.00	0.00	3,529 0	-47 3	38 0	0 0	0.00	0 00	Point Lookout Ss.
3,600 0	0.00	0 00	3,600 0	-47 3	38.0	0 0	0.00	0.00	
3,700.0	0.00	0 00	3,700 0	-47 3	38 0	0 0	0 00	0 00	
3,800 0	0.00	0 00	3,800 0	-47 3	38 0	0.0	0 00	0 00	
3,894.0	0 00	0 00	3,894.0	-47 3	38 0	0 0	0.00	0.00	Mancos Shale
3,900.0	0.00	0 00	3,900 0	-47.3	38 0	0 0	0 00	0 00	
4,000 0	0 00	0.00	4,000 0	-47 3	38 0	0 0	0 00	0 00	
4,100.0	0 00	0.00	4,100.0	-47 3	38 0	0.0	0 00	0.00	
4,200.0	0 00	0.00	4,200.0	-47 3	38.0	0 0	0 00	0 00	
4,300.0	0 00	0.00	4,300 0	-47 3	38 0	0 0	0.00	0 00	
4,400.0	0 00	0.00	4,400 0	-47 3	38.0	0 0	0 00	0 00	

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Site:	S8-T30N-R14W	**North Reference:**	True
Well:	Meadows I08-3014 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #6		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
4,490.0	0.00	0.00	4,490 0	-47.3	38 0	0.0	0.00	0.00	KOP @ 4490'
4,500 0	1.00	345.68	4,500 0	-47.2	38.0	0 0	10.00	10 00	
4,600 0	11 00	345.68	4,599.3	-37.1	35 4	3 0	10.00	10 00	
4,664 9	17 49	345.68	4,662.2	-21.7	31 5	7 5	10.00	10 00	EOB; Inc=17 49°
4,672.2	17 49	345 68	4,669.1	-19.6	31 0	8 1	0.00	0 00	Start 10 6° build @ 4672' MD
4,700 0	18 42	336.56	4,695.6	-11 5	28 2	11 2	10.61	3 32	
4,800.0	24.45	312.30	4,788 8	17.0	6 5	33 9	10.61	6.04	
4,892 8	32.14	299 21	4,870 5	42.1	-29.3	70.7	10 61	8 29	Gallup Fn.
4,900 0	32.79	298.43	4,876.6	43.9	-32.7	74 1	10 61	8.90	
5,000 0	42 07	289.91	4,956.0	68.3	-88.2	130.5	10 61	9 28	
5,100 0	51 78	284 05	5,024.3	89 3	-158 0	201.0	10 61	9 72	
5,200 0	61.72	279.60	5,079.0	106 3	-239 7	283.4	10 61	9 94	
5,300 0	71.78	275.92	5,118.5	118.5	-330 7	374 7	10 61	10 06	
5,400.0	81.90	272 64	5,141 2	125 7	-427 6	471 8	10 61	10 12	
5,484 8	90.50	270.00	5,146.8	127 7	-512 1	556 3	10 61	10.14	Landing Pt @ 5484' MD; 90.5° - M I08-3014 01I
5,500.0	90 50	270 00	5,146 7	127 7	-527.3	571 6	0 00	0.00	
5,600 0	90 50	270 00	5,145 8	127 7	-627.3	671.5	0 00	0 00	
5,700 0	90 50	270 00	5,144.9	127 7	-727.3	771 4	0 00	0 00	
5,800.0	90 50	270 00	5,144 1	127 7	-827.3	871 3	0 00	0.00	
5,900 0	90 50	270 00	5,143 2	127 7	-927.3	971 3	0 00	0 00	
6,000.0	90 50	270 00	5,142 3	127.7	-1,027 3	1,071 2	0 00	0.00	
6,100.0	90 50	270 00	5,141 5	127.7	-1,127.3	1,171 1	0 00	0.00	
6,200.0	90 50	270.00	5,140 6	127.7	-1,227.3	1,271 0	0.00	0.00	
6,300 0	90.50	270.00	5,139.7	127.7	-1,327 3	1,371.0	0 00	0.00	
6,400 0	90.50	270 00	5,138.8	127.7	-1,427 3	1,470 9	0 00	0 00	
6,500.0	90.50	270 00	5,138 0	127.7	-1,527.3	1,570 8	0 00	0.00	
6,600.0	90 50	270 00	5,137 1	127.7	-1,627 3	1,670 7	0 00	0 00	
6,700 0	90 50	270 00	5,136.2	127.7	-1,727 3	1,770.7	0 00	0 00	
6,800.0	90 50	270.00	5,135.3	127 7	-1,827 3	1,870 6	0 00	0 00	
6,900.0	90 50	270 00	5,134.5	127 7	-1,927 3	1,970.5	0.00	0 00	
7,000.0	90 50	270 00	5,133.6	127 7	-2,027.3	2,070 4	0.00	0 00	
7,100 0	90 50	270.00	5,132.7	127 7	-2,127 3	2,170 4	0.00	0 00	
7,200 0	90 50	270 00	5,131.9	127 7	-2,227 3	2,270.3	0 00	0 00	
7,300.0	90 50	270 00	5,131 0	127 7	-2,327 3	2,370.2	0 00	0 00	
7,400.0	90 50	270 00	5,130.1	127 7	-2,427 3	2,470.1	0 00	0 00	
7,500.0	90.50	270 00	5,129 2	127.7	-2,527 2	2,570.1	0 00	0 00	
7,600 0	90 50	270 00	5,128 4	127 7	-2,627.2	2,670.0	0 00	0 00	
7,700 0	90.50	270 00	5,127 5	127.7	-2,727.2	2,769 9	0.00	0 00	
7,800.0	90.50	270 00	5,126.6	127.7	-2,827 2	2,869 8	0.00	0 00	
7,900 0	90 50	270 00	5,125 7	127.7	-2,927 2	2,969.8	0.00	0 00	
8,000 0	90 50	270 00	5,124 9	127.7	-3,027 2	3,069 7	0.00	0.00	
8,100.0	90.50	270 00	5,124.0	127.7	-3,127 2	3,169.6	0 00	0.00	
8,200.0	90.50	270 00	5,123 1	127.7	-3,227.2	3,269 5	0 00	0.00	
8,300.0	90.50	270.00	5,122 3	127.7	-3,327 2	3,369.5	0 00	0.00	
8,400 0	90 50	270 00	5,121.4	127.7	-3,427 2	3,469.4	0 00	0.00	
8,500 0	90.50	270.00	5,120 5	127.7	-3,527.2	3,569 3	0.00	0 00	
8,600 0	90 50	270 00	5,119.6	127.7	-3,627.2	3,669.2	0 00	0 00	
8,700 0	90.50	270.00	5,118 8	127.7	-3,727.2	3,769 2	0 00	0.00	
8,800.0	90.50	270 00	5,117.9	127.7	-3,827.2	3,869 1	0 00	0.00	
8,900.0	90 50	270 00	5,117.0	127 7	-3,927 2	3,969 0	0 00	0 00	
9,000.0	90 50	270 00	5,116.1	127 7	-4,027 2	4,068 9	0 00	0 00	
9,100.0	90.50	270 00	5,115.3	127 7	-4,127 2	4,168 9	0.00	0 00	

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Project:	San Juan Co, NM	**MD Reference:**	KBE @ 5557 0ft
Site:	S8-T30N-R14W	**North Reference:**	True
Well:	Meadows I08-3014 01H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #6		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Comments / Formations
9,200 0	90 50	270.00	5,114 4	127 7	-4,227 2	4,268 8	0.00	0.00	
9,300 0	90 50	270.00	5,113.5	127.7	-4,327.2	4,368 7	0 00	0 00	
9,400 0	90 50	270 00	5,112.7	127 7	-4,427 2	4,468 6	0 00	0 00	
9,500 0	90.50	270 00	5,111 8	127 7	-4,527.2	4,568.6	0 00	0 00	
9,584.8	90 50	270.00	5,111 0	127 7	-4,612.0	4,653.3	0 00	0.00	TD at 9584.8 - M I08-3014 01H PBHL

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
M I08-3014 01H PBHL - plan hits target center - Point	0 00	0 00	5,111 0	127 7	-4,612 0	2,120,460 06	2,574,681 34	36° 49' 34 35 N	108° 20' 25 58 W
M I08-3014 01H LP - plan hits target center - Point	0.00	0 00	5,146 8	127 7	-512 1	2,120,438 99	2,578,781 13	36° 49' 34.36 N	108° 19' 35 15 W

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
656 0	656 0	Fruitland Coal		-0 50	
1,089 0	1,089 0	Pictured Cliffs Ss.		-0.50	
1,271 0	1,271 0	Lewis Shale		-0 50	
2,634 0	2,634 0	Cliffhouse Ss		-0.50	
2,774 0	2,774 0	Menefee Fn		-0.50	
3,529.0	3,529 0	Point Lookout Ss.		-0.50	
3,894 0	3,894.0	Mancos Shale		-0 50	
4,892 8	4,871.3	Gallup Fn		-0.50	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,490 0	4,490 0	-47.3	38.0	KOP @ 4490'
4,664 9	4,662 2	-21.7	31 5	EOB, Inc=17 49°
4,672 2	4,669.1	-19.6	31 0	Start 10.6° build @ 4672' MD
5,484.8	5,146 8	127 7	-512.1	Landing Pt @ 5484' MD, 90 5°
9,584.8	5,111 0	127 7	-4,612 0	TD at 9584 8