State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date: 3-17-14

Application Type:

☐ P&A ☒ Drilling/Casing Change ☐ Recomplete/DHC

☐ Location Change ☒ Other: Does Not Need NSL

Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf_Owner	UL	Sec	Twp	N/S	Rng	W/E
30-043-21154-00-00	CHACO SLOPE 22 7 35	001H	SG INTERESTS I LTD	O	N	Sandoval	F	A	35	22	N	7	W

Conditions of Approval:

Notify NMOCD 24hrs prior to beginning operations

NSL is not required for this wellbore plan

Hold C 104 for directional survey and as drilled plat

Oil base muds are not to be used until fresh water zones are cased and cemented providing isolation from the oil or diesel. This includes synthetic oils. Oil based mud, drilling fluids and solids must be contained in a steel closed loop system.

Via sundry to BLM, amend well number to #1H (from #1)

NMOCD Approved by Signature

5/9/14
Date

GEOLOGIST DISTRICT #3

Form 3160-5
(March 2012)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED
MAR 14 2014
Farmington Field Office
Bureau of Land Management

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

SUNDRY NOTICES AND REPORTS ON WELLS

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

SUBMIT IN TRIPLICATE – *Other instructions on page 2.*

1. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other	5. Lease Serial No. NM99740
	6. If Indian, Allottee or Tribe Name
	7. If Unit of CA/Agreement, Name and/or No.
	8. Well Name and No. Chaco Slope 22-7-35 #1
2. Name of Operator: SG Interests I, LTD	9. API Well No. 30-043-21154
3a. Address: P. O. Box 2677, Durango, CO 81302-2677 — 3b. Phone No. *(include area code)*: 505-634-6393	10. Field and Pool or Exploratory Area: Rusty Gallup
4. Location of Well *(Footage, Sec., T.,R.,M., or Survey Description)*: Surface: 800' FNL, 250' FEL; Bottom Hole: 800' FNL, 400' FWL; Sec, 35, T22N, R7W	11. County or Parish, State: Sandoval, NM

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 Amended C-102
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Amended Drlg. Pgm
☐ 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.)

Amended NM Oil Conservation Division C-102
Amended Eight Point Drilling Program
Amended Drilling Procedure
Amended Horizontal Planning Report
Amended Wellbore Diagram

RCVD MAR 19 '14
OIL CONS. DIV.
DIST. 3

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

CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.

14. I hereby certify that the foregoing is true and correct. Name *(Printed/Typed)*: Mike L. Mankin — Title: Agent for SG Interests I, Ltd.

Signature: Mike L Mankin — Date: 03/11/2014

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by: William Tambekou — Title: Petroleum Engineer — Date: 3/17/2014

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: FPO

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

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

RECEIVED
MAR 1
Farmington Field Office
Bureau of Land Management

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30-043-21154	52860	Rusty Gallup

[4] Property Code	[5] Property Name	[6] Well Number
	CHACO SLOPE 22-7-35	1H

[7] OGRID No.	[8] Operator Name	[9] Elevation
20572	SG INTERESTS I, LTD.	6946

[10] Surface Location

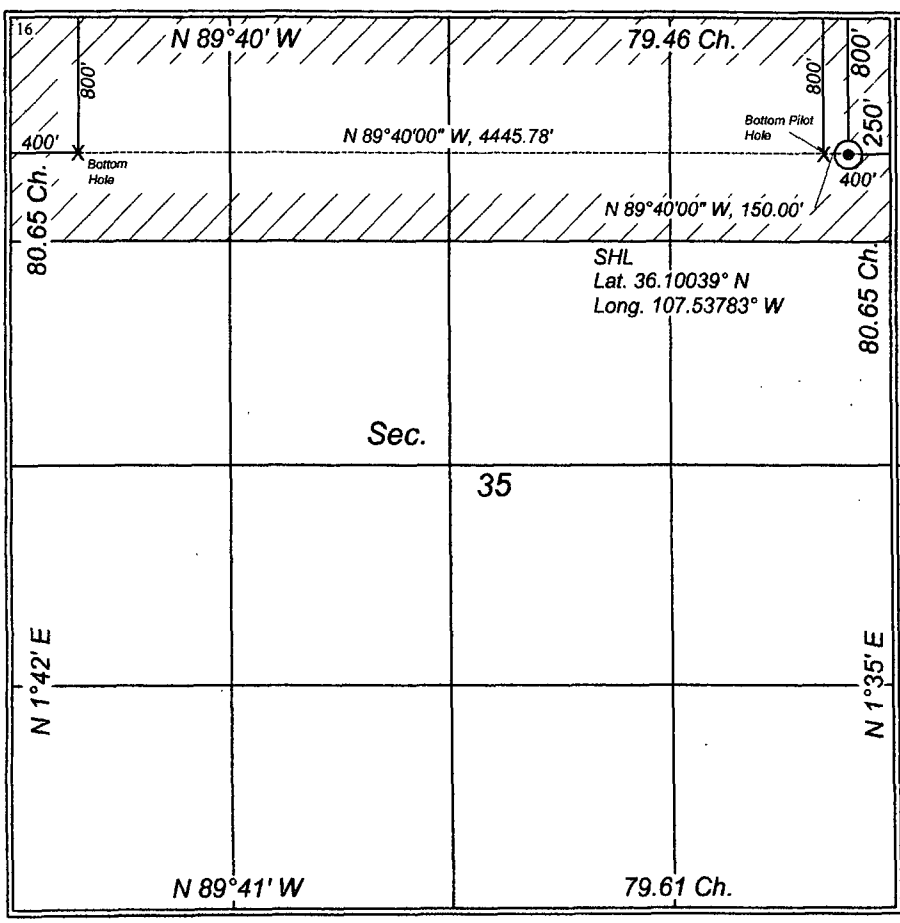
UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
A	35	22 N	7 W		800	North	250	East	Sandoval

[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
D	35	22 N	7 W		800	North	400	West	Sandoval

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

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.



Bearings from GLO PLat

[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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 3.11.14

Mike L. Muskin
Printed Name

mgcattle@yahoo.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.

Rev. 29 Jan 2014
Date of Survey: 20 SEPTEMBER 2012

Signature and Seal of Professional Surveyor:

WILLIAM E. MANNKE II
NEW MEXICO
8466
REGISTERED PROFESSIONAL LAND SURVEYOR

William E. Mannke II
Certificate Number 8466

SG Interests I, Ltd.
(Agent: Nika Energy Operating, LLC)
PO Box 2677
Durango, CO 81302-2677

Chaco Slope 22-7-35 #1
NENE/4 Sec 35, T22N-R7W
800' FNL & 250' FEL
Lat 36.10039, Long -107.53783
Sandoval County, New Mexico

EIGHT POINT DRILLING PROGRAM

1. Estimated Formation Tops:

	Depth
Ojo Alamo	590'
Pictured Cliffs	1140'
Bentonite	1630'
LaVentana	1890'
Cliff House	2190'
Point Lookout	3500'
Mancos	3625'
Niobrara	4175'
Gallup	4450'
Horizontal Target	4675'

2. Estimated Depth of Anticipated Minerals:

Gas	Fruitland	650'
Oil	Menefee	2100'
Oil	Gallup	4450'

3. Minimum Specifications for Pressure Control Equipment:

BOP equipment and accessories will meet or exceed BLM requirements outlined in 43 CFR Part 3160. (See attached diagram).

A 3000 psig 11" Double Ram hydraulic BOP, an 11" Annular type BOP and a 3000 psi rotating head will be used. Accessories to the BOP will meet BLM requirements for a 3000 psig system. The accumulator system capacity will be sufficient to close all BOPE with a 50% safety factor. Fill line, kill line and line to choke manifold will be 2". BOP's will be function tested every 24 hours and will be recorded on IADC log.

Surface casing will be tested to 1500 psig for 30 minutes. Accessories to BOPE will include upper and lower Kelly cocks with handles, stabbing valve to fit drill pipe on floor at all times, string float at bit, 2000 psig choke manifold with 2" adjustable, 2" positive chokes, and pressure gauge.

4. Casing and Cementing Program:

Hole Size	Interval	Csg Size	Wt, Grd, Jt
12-1/4"	0-500'	9-5/8"	36#, J-55, STC
8-3/4"	0-5002'	7"	23#, J-55, LTC
6-1/8""	4100'- 8875'	4-1/2"	11.6#, N-80, LTC

Surface Casing will be cemented with 275 sx (322 cu ft) Class "G" w/1/8#/sx of polyflake (Yield = 1.17 cu ft/sx, Weight = 15.8 #/gal). Cement volumes include 100% excess to circulate cement to surface. A guide shoe, differential float collar and 6 centralizers will be used. WOC time is 8 hours *and* until surface samples are hard. The casing will be pressure tested to 1500 psig.

Intermediate Casing will be cemented with **Lead** - 475 sx (684 cu ft) Foamed 50/50 Poz, .2% Versaset (Yield = 1.44 cu ft/sx, Weight = 13.0 #/gal) and **Tail** – 100 sx (129 cu ft) 50/50 Poz, .2% Versaset. Cement volumes include 30% excess to circulate cement to surface. A float shoe, and differential float collar will be used. Centralizers will be run on the first 10 joints and every 3rd joint thereafter to 2500', then one centralizer at 200', 1500', and 1000'. WOC time is minimum 12 hours *and* until surface samples are hard. The casing will be pressure tested to 1500 psig.

Production Liner will be cemented with - **Lead** - 50 sx (65 cu ft) 50/50 Poz, .2% Versaset, (Yield = 1.29 cu ft/sx, Weight = 13.5 #/gal), **Main** – 230 sx (331 cu ft) Foamed 50/50 Poz + .2% Versaset, (Yield = 1.44 cu ft/sx, Weight = 13.0 #/gal), and **Tail** – 100 sx (129 cu ft) 50/50 Poz + .2% Versaset, (Yield = 1.29 cu ft/sx, Weight = 13.5 #/gal). Circulate only if necessary until TD is reached. Cement liner to liner top and includes 30% excess in the calculation. A float shoe, and float collar will be used. Centralizers will be run on every joint of casing from the shoe thru the curve.

5. Mud Program:

A fresh water native mud (using lime, benex & gel additions) will be used to drill the surface hole. The 8-3/4" hole will be drilled with native mud and a LSND mud as necessary for hole stability from the surface shoe to the intermediate casing point. The horizontal lateral will be drilled with oil based mud.

The Fruitland Coal and Mesa Verde are expected to be under-pressured to normal-pressured and may encounter lost circulation. LCM will be stored on location and used as needed in the event of lost circulation. Barite will also be on location in the event an over-pressured zone is encountered and a kick is taken.

A closed loop mud system will be used on all phases of the well. Above ground tanks will be used to hold fluids and cuttings. Wastes will be disposed of properly at an EPA approved site. Fresh water/cuttings will be disposed of at an approved site such as Industrial Ecosystems or Basin Disposal.

Mud Interval, MD	Mud Type	Funnel Weight	Water Viscosity	Loss
0' – 500'	Native	8.5-9.1	30-50	1-10
500' – 5002'	Native/LSND	8.5–9.3	30–50	8–10
5002'- TD	Oil Based	7.5-9.3	30–50	8–10

6. Testing, Coring and Logging Program:

No DST's or cores are planned. A mud logger will be on location from drilling of the casing shoe to TD. Any Open-hole logs will include GR, Induction, Density and Caliper Logs. The GR-Density logs and GR-Induction-Caliper logs will be run from TD to the bottom of the surface casing. Cased hole CBL/CCL/GR/VDL will be run as needed for perforating.

7. Anticipated Abnormal Pressures and Temperatures:

No abnormal pressures or temperatures are expected in this well. Maximum anticipated Gallup reservoir pressure is 2035 psig with a normal temperature gradient.

No H_2S is anticipated, but if H_2S is encountered the guidelines in Onshore Order #6 will be followed.

8. Operations:

Anticipated spud date is June 2014 or as soon as permits are received and work can be scheduled. Estimated drilling time is 45 days. The Gallup will be completed as a cased hole completion, perforated and hydraulically fracture stimulated. Completion operations are expected to take 15 days and will commence as soon after completion of drilling operations and scheduling allow.

SG INTERESTS I, Ltd.

Horizontal Gallup Test Well

Drilling Procedure

February, 2014

Bob Sagle, P.E.

WELL NAME:	Chaco Slope 22-7-35 #1H
FIELD NAME:	Gallup Wildcat
SURFACE LOCATION:	NENE ¼, Section 35, T22N, R7W 800' FNL, 250' FEL UL-A Lat 36.10039° N, Long -107.53783° W Sandoval County, New Mexico
BOTTOM HOLE LOCATION:	NWNW ¼, Section 35, T22N, R7W 800' FNL, 400' FWL
ELEVATION:	6,946 GL
PROPOSED TD:	4,675' TVD, MD 8,875'
DATE:	February, 2014

NOTE: Review APD Stipulations before moving on location. Review regulatory notification requirements and notify accordingly. Comply with all safety and environmental requirements.

NOTIFY: BLM Field Office Manager (Inspection and Enforcement Section) 24 hours before SPUD, CEMENTING OR PLUGGING OPERATIONS at (505) 599-8907.

DIRECTIONS: From Counselor Trading Post on US Hwy 550, travel south on Hwy 550 ± 0.1 miles, turn right on dirt road with sign: "Star Lake Compressor-26 miles". This is the 0 miles point for this description. Follow dirt road (Rd # 46):

AT: 15.4 miles – Turn right (northwest) and follow access road,
" 16.1 miles – Turn left (west) still following access road,
" 16.5 miles – Turn right and follow access road ±1675 feet to location.

DRILLING SKELETON:

Interval	Hole Size	Casing Size	Measured Depth, ft	TVD, ft
Surface	12 ¼"	9 5/8"	500	500
Intermediate	8 ¾"	7"	5002	4675
Production Liner	6 1/8"	4 ½"	8875	4675

NOTE: the production liner will be tied back to surface using a 4 ½" fracture string. It will likely be removed following completion. Liner top will be located at approximately the Kick Off Point of the 8 ¾" hole at 4150'.

MUD PROGRAM:

Interval, MD	Mud Type	Mud Weight	Funnel Viscosity	Water Loss
0' – 500'	Native	8.5 - 9.1	30 - 50	1 - 10
500' – 5002'	Native/LSND	8.5 – 9.3	30 – 50	8 – 10
5002'- TD	Oil Based	7.5 - 9.3	30 – 50	8 - 10

CASING AND CEMENTING PROGRAM:

Interval	Size, Wt, Grade, Thread	Depth, MD	Cement
Surface	9 5/8", 36#, J55 STC	500'	275sx Class G + 1/8 #/sx poly-flake + 2% CACL
Intermediate	7", 23# , J55, LT&C	5002'	475 sx Foamed 50/50 Poz, .2% Versaset Followed by: 100 sx 50/50 Poz, .2% Versaset
Production Liner	4 ½", 11.6#, N-80, LT&C TD		50 sx 50/50 Poz, .2% Versaset 230 sx Foamed 50/50 Poz + .2% Versaset 100 sx 50/50 Poz + .2% Versaset

Liner will be tied back to surface during fracture treatments, then likely removed.

WELLHEAD:

3000# 9-5/8" 3M x 9 5/8" 8rd casing head
3000# 7 1/16" 3M x 7 1/16" 3M casing spool with flanged gate valves
3000# 7 1/16" 3M x 7-1/16" 3M tubing head with RTJ flanged gate valves",
3000# B2P, 7-1/16" 3M x 3-1/8" 3M Upper tree adapter with RTJ flanged gate valve.

NOTE: section must accommodate 4 ½" tie back frac string.

BLOWOUT PREVENTION EQUIPMENT REQUIREMENTS:

Description	Rating
11" Double Ram Type Preventer	3000 psi
11 " Annular Preventer	3000 psi
Rotating Head	3000 psi

BOPE testing will be done by a third party tester in accordance with Onshore Order No. 2. The test must be performed and recorded using a test pump, calibrated test gauges and properly calibrated strip or chart recorder. The test gauges and recorders must be of the proper range and resolution commensurate with the authorized test pressure. The test must be recorded and will include a low pressure test requirement of 250 psig and a high pressure test requirement of 100% of rated working pressure for the ram type BOPE(3000 psi) and 50% of rated working pressure for the annular BOPE(1500 psi). Casing and manifold pressure tests must be held for 30 minutes with no more than 10 percent pressure drop during the test.

GEOLOGIC PROGNOSIS:

Elevations: GL ~ 6946', KB ~ 6961'

Formation Tops	Depth
Ojo Alamo	590'
Pictured Cliffs	1140'
Bentonite	1630'
LaVentana	1890'
Cliff House	2190'
Point Lookout	3500'
Mancos	3625'
Niobrara	4175'
Gallup	4450'
Horizontal Target	4675'

Note: A mud logger will be on location from drilling of the surface shoe to TD.

DIRECTIONAL DRILLING PROGRAM: (directional plans attached)

An 8 ¾" vertical hole will be drilled into the Niobrara at 4102'. The hole will be kicked off at 4,150' and angle built at 10 degrees/100' to an inclination of 90 degrees to the 7" intermediate casing point in the Gallup Formation at 5,002'. A 6 1/8" hole will be drilled horizontally to TD at 8,875'. The production liner top will be located near the Kick Off Point.

MUD PROGRAM:

A fresh water native mud (using lime, benex & gel additions) will be used to drill the surface hole. The 8-3/4" hole should be drilled with native mud and a LSND mud as necessary for hole stability from the surface shoe to the intermediate casing point. The horizontal lateral will be drilled with oil based mud.

The Fruitland Coal and Mesa Verde are expected to be under-pressured to normal-pressured and may encounter lost circulation. LCM should be stored on location and used as needed in the event of lost circulation. Barite should also be on location in the event an over-pressured zone is encountered and a kick is taken.

A closed loop mud system will be used on all phases of the well. Above ground tanks will be used to hold fluids and cuttings. Wastes will be disposed of properly at an EPA approved site. Fresh water/cuttings will be disposed of at an approved site such as Industrial Ecosystems or Basin Disposal.

CASING AND CEMENTING PROCEDURE:

Note: Notify BLM 24 hours prior to spud, testing of BOP's and cementing.
505-599-8907. NMOCD needs to be notified 24 hrs in advance of cementing.

Surface Casing:

1. Drill to a minimum of 500' to accommodate tallied 9 5/8" casing plus 3'. Casing tally to be taken on location.
2. Use a landing joint of 9 5/8" casing to set casing at ground level. Guide shoe on casing should be not more than 10 feet off bottom. Casing head flange to be set at ground level.
3. Roll casing off truck with thread protectors in place.
4. Visually inspect, rabbit, number, and tally casing on racks. Remove thread protectors and clean threads. Use quick release protectors while running casing. Do not move or roll casing without thread protectors in place.
5. Bakerlok 9 5/8" guide shoe to bottom of first joint of casing.
6. Bakerlok 9 5/8" differential float collar to top of first joint of casing. Bakerlok second joint of casing into top of float collar
7. Casing should be made up to proper torque using an API thread compound.

8. Casing should be run no faster than 2 feet per second (20 seconds per 40 foot joint). At the first indication of mud loss, the running time should be doubled to 40 seconds per joint (1 foot per second).
9. Break circulation at 250 feet and circulate a minimum of 15 minutes. Make sure that the hole is not flowing. Adjust mud properties as necessary. Circulate the last joint of casing **to TD. Rotate pipe before kicking in pumps. Kick pumps in slowly to minimize surge pressures.**

Surface Casing cont.

10. Centralizers should be run on each of the first 6 joints. A stop-ring should be used to hold the first centralizer in place. Place the remaining centralizers on collars.
11. After casing is landed at TD, circulate hole until mud properties measured at the flowline are within the ranges given in the "Mud Program" of this drilling prognosis.
12. Rig up rotational cementing head and return lines. Chixson should be long enough to allow 25'-30' reciprocation.
13. Pump 10 barrels of fresh water. Pump 20 barrel chemical wash. Pump cement slurry. Wash lines.
14. Drop top plug and displace with water. Do not over-displace. Pipe should be rotated at 10-20 RPM or reciprocated at least 20 feet every two to three minutes throughout displacement.
15. Bump plug with 500 psi over final displacement pressure. Hold pressure for 5 minutes. If plug does not bump, hold initial shut down pressure on casing for 5 minutes. Then check to see that float is holding (flow back into cement pump tank).
16. Wait on cement a minimum of 8 hours or until surface samples are hard, whichever is longer **before** nippling up the BOP. Test BOP's. Test surface casing to 1000#.

Intermediate Casing: NOTE: The need and depth of a DV tool will be considered based on drilling conditions.

1. Drill to intermediate csg pt.
2. Roll casing off truck with thread protectors in place.
3. Change out pipe rams to accommodate 7" casing.
4. Visually inspect, rabbit, number, and tally casing on racks. Remove thread protectors and clean threads. Use quick release protectors while running casing. Do not move or roll casing without thread protectors in place.
5. Bakerlok 7" float shoe to bottom of first joint of casing.
6. Bakerlok 7" differential float collar to top of first joint of casing. Bakerlok second joint of casing into top of float collar
7. Casing should be made up to proper torque using an API thread compound.
8. Casing should be run no faster than 2 feet per second (20 seconds per 40 foot joint). At the first indication of mud loss, the running time should be doubled to 40 seconds per joint (1 foot per second).
9. Break circulation at 2000 feet, and 4000 feet and circulate each a minimum of 30 minutes. Make sure that the hole is not flowing. Adjust mud properties as necessary. Circulate the last joint of casing to TD. Kick pumps in slowly to minimize surge pressures.

Intermediate Casing cont.

10. Centralizers should be run on each of the first 10 joints, every 3rd joint to 2500', then one centralizer at 2000', 1500', and 1000'. A stop-ring should be used to hold the first centralizer in place. Place the remaining centralizers on collars.
11. After casing is landed just above TD, circulate hole until mud properties measured at the flowline are within the ranges given in the "Mud Program" of this drilling prognosis.
12. Rig up rotational cementing head and return lines. Chixson should be long enough to allow 25'-30' reciprocation.
13. Pump 10 barrels of fresh water. Pump 20 barrel chemical wash. Pump cement slurry. Wash lines.
14. Drop top plug and displace with water. Do not over-displace. If Possible, pipe should be rotated at 10-20 RPM or reciprocated at least 20 feet every two to three minutes throughout displacement. Bump plug with 500 psi over final displacement pressure. Hold pressure for 4 hours or until cement is set, to avoid the potential of collapsed casing. If plug does not bump, hold initial shut down pressure on casing for 4 hours or until cement is set.
15. Wait on cement a minimum of 12 hours or until surface samples are hard, whichever is longer **before** nippling down the BOP. NUBOP stack and test. Test intermediate csg to 1500#.

Production Casing: Liner Hanger should be placed near the Kick Off Point.

1. Drill to TD and verify depth. Pump hi vis sweep and TOOH. LD directional tools and MWD.
2. P/U BHA and reamer and ream lateral as needed. Circ and TOOH.
3. Bakerlok float shoe. Bakerlok float collar on top of 1st jt.
4. TIH w/ 4 ½" liner, and liner hanger packer on DP/HWDP. NOTE: liner hanger packer to have PBR and be set in vertical section of well.
5. Run one slider centralizer on every jt of casing from the shoe through the curve.
6. Circulate @ 7" csg shoe and note pressures. Circulate only if necessary until TD is reached. Circulate @ TD.
7. Cement liner to liner top, set liner hanger PKR. Reverse out cement. Test back side.
8. TOOH and LDDP/HWDP.
9. TIH w/ 4 ½" tie back frac string. Latch liner hanger PKR and space out. Circulate well clean with KCL water. Land in WH hanger. Test liner and back side.
10. NDBOP and NUWH.
11. Rig down.

Cement Slurry Designs and Notes

Slurry	Cement & Additives	Water gals/sx	Weight PPG	Yield cu ft/sx
Surface	Class G + 1/8 #/sx poly flake + 2% CACL	5.0	15.8	1.17
Intermediate				
Lead	Foamed 50/50 Poz .2% Versaset	N/A	13.0	1.44
Tail	50/50 Poz, .2% Versaset	N/A	13.5	1.29
Production Liner				
Lead	50/50 Poz, .2% Versaset	N/A	13.5	1.29
Foamed CMT	50/50 Poz + .2% Versaset	N/A	13.0	1.44
Tail	50/50 Poz + .2% Versaset	N/A	13.5	1.29

Cement Slurry Designs and Notes cont.

Figure slurry volume as follows:

Surface: Calculate slurry based on hole and casing size annular volumes plus 100% excess.

Intermediate: Calculate slurry based on hole and casing size annular volumes plus 30% excess

Production: Calculate slurry based on hole and casing size annular volumes + 30% excess.

NOTES:

1. Pump rates should be a minimum of 4 BPM throughout displacement.
   Slurry weights should be measured using a mud balance at least every 10 minutes during mixing.

2. At least two samples of all slurries should be caught and monitored at room temperature for thickening time.

3. Run temperature log on surface and intermediate casing strings if cement does not circulate.

   CBL

SG Interests I, LTD.

Sandoval County, NM (NAD83)
Chaco Slope 22-7-35
Chaco Slope 22-7-35 1H

Original Wellbore

Plan: Plan #1

Standard Planning Report

06 February, 2014

gyro|data

Precision Wellbore Placement

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Chaco Slope 22-7-35 1H
Company:	SG Interests I, LTD.	**TVD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Project:	Sandoval County, NM (NAD83)	**MD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Site:	Chaco Slope 22-7-35	**North Reference:**	True
Well:	Chaco Slope 22-7-35 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #1		

Project Sandoval County, NM (NAD83)

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site Chaco Slope 22-7-35

Site Position:		**Northing:**	1,858,326.24 usft	**Latitude:**	36° 6' 1.404 N
From:	Lat/Long	**Easting:**	1,259,972.63 usft	**Longitude:**	107° 32' 16.188 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	-0.76 °

Well Chaco Slope 22-7-35 1H

Well Position	**+N/-S**	0.0 usft	**Northing:**	1,858,326.24 usft	**Latitude:**	36° 6' 1.404 N
	+E/-W	0.0 usft	**Easting:**	1,259,972.63 usft	**Longitude:**	107° 32' 16.188 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	6,946.0 usft

Wellbore Original Wellbore

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	02/06/14	9.40	62.89	50,132

Design Plan #1

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	270.33

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
4,102.0	0.00	0.00	4,102.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,002.0	90.00	270.33	4,675.0	3.3	-572.9	10.00	10.00	0.00	270.33	
8,874.9	90.00	270.33	4,675.0	25.9	-4,445.7	0.00	0.00	0.00	0.00	Chaco Slope 22-7-35

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Chaco Slope 22-7-35 1H
Company:	SG Interests I, LTD.	**TVD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Project:	Sandoval County, NM (NAD83)	**MD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Site:	Chaco Slope 22-7-35	**North Reference:**	True
Well:	Chaco Slope 22-7-35 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
590.0	0.00	0.00	590.0	0.0	0.0	0.0	0.00	0.00	0.00
Ojo Alamo									
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,140.0	0.00	0.00	1,140.0	0.0	0.0	0.0	0.00	0.00	0.00
Pictured Cliffs									
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,630.0	0.00	0.00	1,630.0	0.0	0.0	0.0	0.00	0.00	0.00
Bentonite									
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,890.0	0.00	0.00	1,890.0	0.0	0.0	0.0	0.00	0.00	0.00
LaVentana									
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,190.0	0.00	0.00	2,190.0	0.0	0.0	0.0	0.00	0.00	0.00
Cliff House									
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
Point Lookout									
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,625.0	0.00	0.00	3,625.0	0.0	0.0	0.0	0.00	0.00	0.00
Mancos									
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Chaco Slope 22-7-35 1H
Company:	SG Interests I, LTD.	**TVD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Project:	Sandoval County, NM (NAD83)	**MD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Site:	Chaco Slope 22-7-35	**North Reference:**	True
Well:	Chaco Slope 22-7-35 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,102.0	0.00	0.00	4,102.0	0.0	0.0	0.0	0.00	0.00	0.00
Start Build 10.00									
4,150.0	4.80	270.33	4,149.9	0.0	-2.0	2.0	10.00	10.00	0.00
4,175.2	7.32	270.33	4,175.0	0.0	-4.7	4.7	10.00	10.00	0.00
Niobrara									
4,200.0	9.80	270.33	4,199.5	0.0	-8.4	8.4	10.00	10.00	0.00
4,250.0	14.80	270.33	4,248.4	0.1	-19.0	19.0	10.00	10.00	0.00
4,300.0	19.80	270.33	4,296.1	0.2	-33.9	33.9	10.00	10.00	0.00
4,350.0	24.80	270.33	4,342.3	0.3	-52.8	52.8	10.00	10.00	0.00
4,400.0	29.80	270.33	4,386.8	0.4	-75.7	75.7	10.00	10.00	0.00
4,450.0	34.80	270.33	4,429.0	0.6	-102.4	102.4	10.00	10.00	0.00
4,476.0	37.39	270.33	4,450.0	0.7	-117.8	117.8	10.00	10.00	0.00
Gallup									
4,500.0	39.80	270.33	4,468.8	0.8	-132.7	132.7	10.00	10.00	0.00
4,550.0	44.80	270.33	4,505.7	1.0	-166.4	166.4	10.00	10.00	0.00
4,600.0	49.80	270.33	4,539.6	1.2	-203.1	203.1	10.00	10.00	0.00
4,650.0	54.80	270.33	4,570.2	1.4	-242.6	242.7	10.00	10.00	0.00
4,700.0	59.80	270.33	4,597.2	1.7	-284.7	284.7	10.00	10.00	0.00
4,750.0	64.80	270.33	4,620.5	1.9	-329.0	329.0	10.00	10.00	0.00
4,800.0	69.80	270.33	4,639.7	2.2	-375.1	375.1	10.00	10.00	0.00
4,850.0	74.80	270.33	4,654.9	2.5	-422.7	422.7	10.00	10.00	0.00
4,900.0	79.80	270.33	4,665.9	2.7	-471.4	471.5	10.00	10.00	0.00
4,950.0	84.80	270.33	4,672.6	3.0	-521.0	521.0	10.00	10.00	0.00
5,002.0	90.00	270.33	4,675.0	3.3	-572.9	573.0	10.00	10.00	0.00
Start 3872.8 hold at 5002.0 MD									
5,100.0	90.00	270.33	4,675.0	3.9	-670.9	670.9	0.00	0.00	0.00
5,200.0	90.00	270.33	4,675.0	4.5	-770.9	770.9	0.00	0.00	0.00
5,300.0	90.00	270.33	4,675.0	5.1	-870.9	870.9	0.00	0.00	0.00
5,400.0	90.00	270.33	4,675.0	5.6	-970.9	970.9	0.00	0.00	0.00
5,500.0	90.00	270.33	4,675.0	6.2	-1,070.9	1,070.9	0.00	0.00	0.00
5,600.0	90.00	270.33	4,675.0	6.8	-1,170.9	1,170.9	0.00	0.00	0.00
5,700.0	90.00	270.33	4,675.0	7.4	-1,270.9	1,270.9	0.00	0.00	0.00
5,800.0	90.00	270.33	4,675.0	8.0	-1,370.9	1,370.9	0.00	0.00	0.00
5,900.0	90.00	270.33	4,675.0	8.6	-1,470.9	1,470.9	0.00	0.00	0.00
6,000.0	90.00	270.33	4,675.0	9.1	-1,570.9	1,570.9	0.00	0.00	0.00
6,100.0	90.00	270.33	4,675.0	9.7	-1,670.9	1,670.9	0.00	0.00	0.00
6,200.0	90.00	270.33	4,675.0	10.3	-1,770.9	1,770.9	0.00	0.00	0.00
6,300.0	90.00	270.33	4,675.0	10.9	-1,870.9	1,870.9	0.00	0.00	0.00
6,400.0	90.00	270.33	4,675.0	11.5	-1,970.9	1,970.9	0.00	0.00	0.00
6,500.0	90.00	270.33	4,675.0	12.0	-2,070.9	2,070.9	0.00	0.00	0.00
6,600.0	90.00	270.33	4,675.0	12.6	-2,170.9	2,170.9	0.00	0.00	0.00
6,700.0	90.00	270.33	4,675.0	13.2	-2,270.9	2,270.9	0.00	0.00	0.00
6,800.0	90.00	270.33	4,675.0	13.8	-2,370.9	2,370.9	0.00	0.00	0.00
6,900.0	90.00	270.33	4,675.0	14.4	-2,470.9	2,470.9	0.00	0.00	0.00
7,000.0	90.00	270.33	4,675.0	15.0	-2,570.9	2,570.9	0.00	0.00	0.00
7,100.0	90.00	270.33	4,675.0	15.5	-2,670.9	2,670.9	0.00	0.00	0.00
7,200.0	90.00	270.33	4,675.0	16.1	-2,770.9	2,770.9	0.00	0.00	0.00
7,300.0	90.00	270.33	4,675.0	16.7	-2,870.9	2,870.9	0.00	0.00	0.00
7,400.0	90.00	270.33	4,675.0	17.3	-2,970.9	2,970.9	0.00	0.00	0.00
7,500.0	90.00	270.33	4,675.0	17.9	-3,070.9	3,070.9	0.00	0.00	0.00
7,600.0	90.00	270.33	4,675.0	18.4	-3,170.9	3,170.9	0.00	0.00	0.00
7,700.0	90.00	270.33	4,675.0	19.0	-3,270.9	3,270.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Chaco Slope 22-7-35 1H
Company:	SG Interests I, LTD.	**TVD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Project:	Sandoval County, NM (NAD83)	**MD Reference:**	WELL @ 6961.0usft (Original Well Elev)
Site:	Chaco Slope 22-7-35	**North Reference:**	True
Well:	Chaco Slope 22-7-35 1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Wellbore		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,800.0	90.00	270.33	4,675.0	19.6	-3,370.9	3,370.9	0.00	0.00	0.00
7,900.0	90.00	270.33	4,675.0	20.2	-3,470.9	3,470.9	0.00	0.00	0.00
8,000.0	90.00	270.33	4,675.0	20.8	-3,570.9	3,570.9	0.00	0.00	0.00
8,100.0	90.00	270.33	4,675.0	21.4	-3,670.9	3,670.9	0.00	0.00	0.00
8,200.0	90.00	270.33	4,675.0	21.9	-3,770.9	3,770.9	0.00	0.00	0.00
8,300.0	90.00	270.33	4,675.0	22.5	-3,870.9	3,870.9	0.00	0.00	0.00
8,400.0	90.00	270.33	4,675.0	23.1	-3,970.8	3,970.9	0.00	0.00	0.00
8,500.0	90.00	270.33	4,675.0	23.7	-4,070.8	4,070.9	0.00	0.00	0.00
8,600.0	90.00	270.33	4,675.0	24.3	-4,170.8	4,170.9	0.00	0.00	0.00
8,700.0	90.00	270.33	4,675.0	24.8	-4,270.8	4,270.9	0.00	0.00	0.00
8,800.0	90.00	270.33	4,675.0	25.4	-4,370.8	4,370.9	0.00	0.00	0.00
8,874.9	90.00	270.33	4,675.0	25.9	-4,445.7	4,445.8	0.00	0.00	0.00
TD at 8874.9 - Chaco Slope 22-7-35 1H BHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Chaco Slope 22-7-35 1H - plan hits target center - Point	0.00	0.00	4,675.0	25.9	-4,445.7	1,858,410.98	1,255,527.66	36° 6' 1.656 N	107° 33' 10.357 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
590.0	590.0	Ojo Alamo		0.00	
1,140.0	1,140.0	Pictured Cliffs		0.00	
1,630.0	1,630.0	Bentonite		0.00	
1,890.0	1,890.0	LaVentana		0.00	
2,190.0	2,190.0	Cliff House		0.00	
3,500.0	3,500.0	Point Lookout		0.00	
3,625.0	3,625.0	Mancos		0.00	
4,175.2	4,175.0	Niobrara		0.00	
4,476.0	4,450.0	Gallup		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
4,102.0	4,102.0	0.0	0.0	Start Build 10.00
5,002.0	4,675.0	3.3	-572.9	Start 3872.8 hold at 5002.0 MD
8,874.9	4,675.0	25.9	-4,445.7	TD at 8874.9

Company: SG Interests I, LTD.
Field: Sandoval County, NM (NAD83)
Location: Chaco Slope 22-7-35
Well: Chaco Slope 22-7-35 1H
Original Wellbore
Plan: Plan #1 (Chaco Slope 22-7-35 1H/Original Wellbore)
WELL @ 6961.0usft (Original Well Elev)

gyrodata
Precision Wellbore Placement

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	4102.0	0.00	0.00	4102.0	0.0	0.0	0.00	0.00	0.0	
3	5002.0	90.00	270.33	4675.0	3.3	-572.9	10.00	270.33	573.0	
4	8874.9	90.00	270.33	4675.0	25.9	-4445.7	0.00	0.00	4445.8	Chaco Slope 22-7-35 1H BHL

WELL DETAILS: Chaco Slope 22-7-35 1H

Ground Level: 6946.0
WELL @ 6961.0usft (Original Well Elev)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1858326.23	1259972.63	36° 6' 1.404 N	107° 32' 16.188 W	

ANNOTATIONS

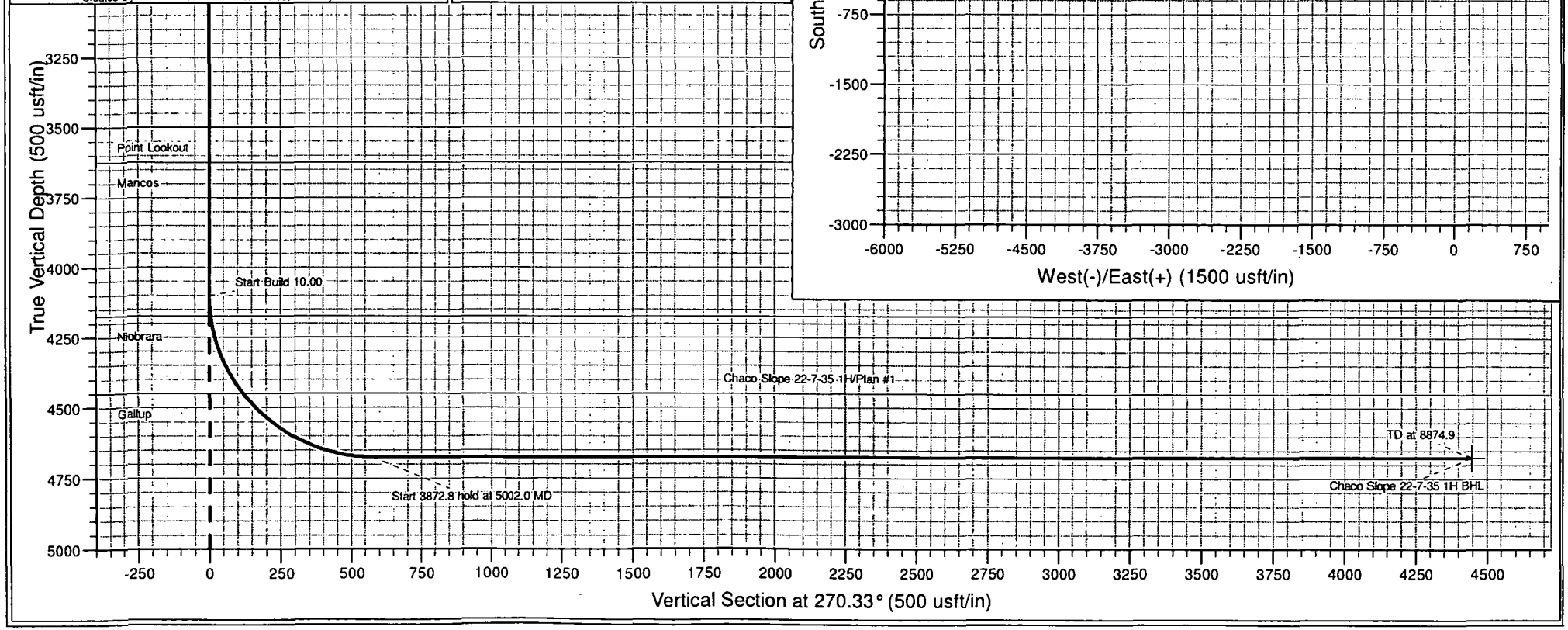
TVD	MD	Annotation
4102.0	4102.0	Start Build 10.00
4675.0	5002.0	Start 3872.8 hold at 5002.0 MD
4675.0	8874.9	TD at 8874.9

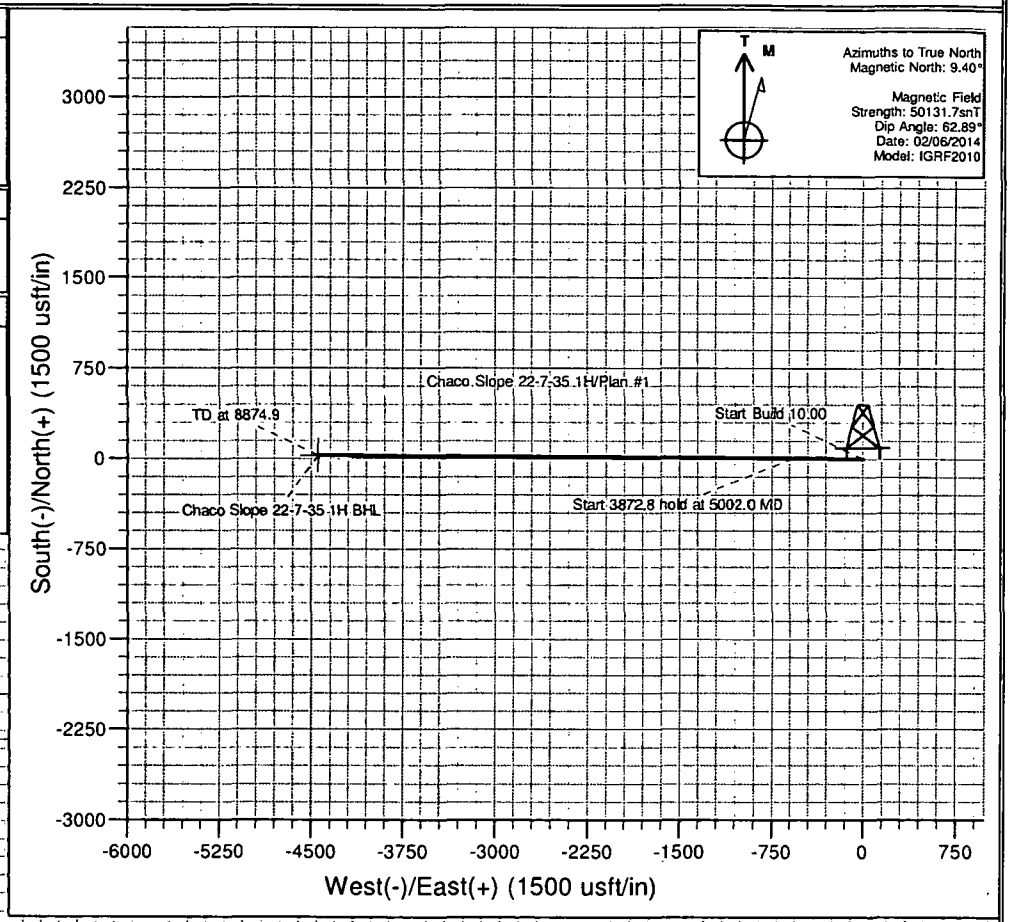
FORMATION TOPS ALONG WELLPATH

TVDPath	MDPath	Formation
590.0	590.0	Ojo Alamo
1140.0	1140.0	Pictured Cliffs
1630.0	1630.0	Bentonite
1890.0	1890.0	LaVentana
2190.0	2190.0	Cliff House
3500.0	3500.0	Point Lookout
3625.0	3625.0	Mancos
4175.0	4175.2	Niobrara
4450.0	4476.0	Gallup

Plan: Plan #1 (Chaco Slope 22-7-35 1H/Original Wellbore)

Created By: Lauren Newton Date: 23:33, February 06 2014





WELLBORE DIAGRAM, Preliminary

SG Interests I, Ltd.

Chaco Slope 22-7-35 #1H

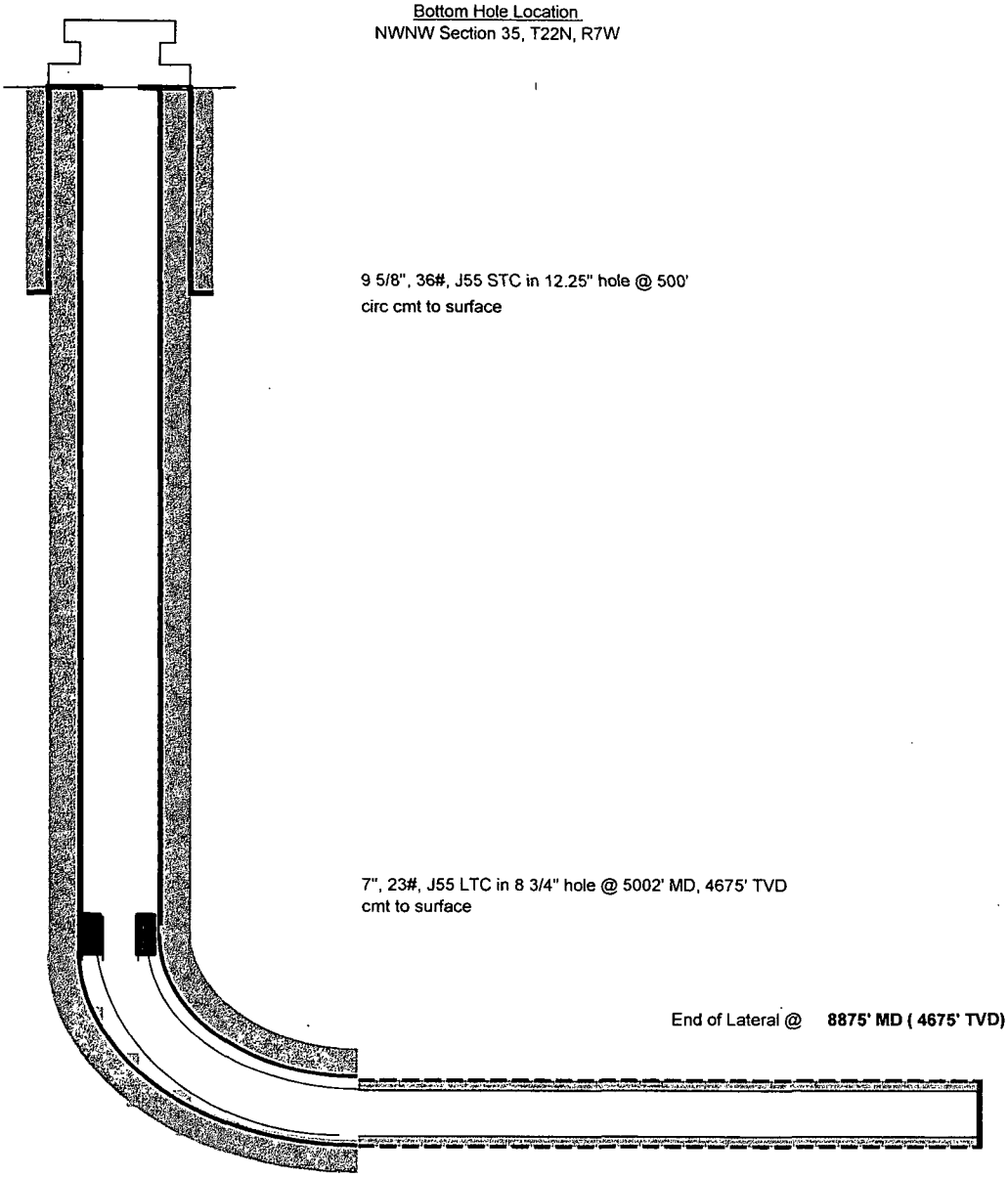
GL 6946'

Sandoval Co, NM

Well Info

Surface Location
NENE Section 35, T22N, R7W

Bottom Hole Location
NWNW Section 35, T22N, R7W



500

9 5/8", 36#, J55 STC in 12.25" hole @ 500'
circ cmt to surface

7", 23#, J55 LTC in 8 3/4" hole @ 5002' MD, 4675' TVD
cmt to surface

TOL @ 4100'

Kick off pt @ 4102'

Build @ 10 degrees/100'

End of Lateral @ **8875' MD (4675' TVD)**

4 1/2", 11.6#, N-80, LTC liner
Cement to Liner Top
Perf and Plug and Frac'd