State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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

David R. Catanach
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 3160-3 APD form.

Operator Signature Date: 12-5-14
Well information;
Operator SG Interests Well Name and Number Navajo 21-7-25 #4
API# 30-043-21239, Section 25, Township 21 (N)/S, Range 7 E/(W)

Conditions of Approval:
(See the below checked and handwritten conditions)

- ✓ Notify Aztec OCD 24hrs prior to casing & cement.
- o Hold C-104 for directional survey & "As Drilled" Plat
- o Hold C-104 for NSL, NSP, DHC
- o Spacing rule violation. Operator must follow up with change of status notification on other well to be shut in or abandoned
- o Regarding the use of a pit, closed loop system or below grade tank, the operator must comply with the following as applicable:
  - A pit requires a complete C-144 be submitted and approved prior to the construction or use of the pit, pursuant to 19.15.17.8.A
  - A closed loop system requires notification prior to use, pursuant to 19.15.17.9.A
  - A below grade tank requires a registration be filed prior to the construction or use of the below grade tank, pursuant to 19.15.17.8.C
- o Once the well is spud, to prevent ground water contamination through whole or partial conduits from the surface, the operator shall drill without interruption through the fresh water zone or zones and shall immediately set in cement the water protection string
- ✓ Regarding Hydraulic Fracturing, review EPA Underground Injection Control Guidance 84
- ✓ 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.
- ✓ Well-bore communication is regulated under 19.15.29 NMAC. This requires well-bore Communication to be reported in accordance with 19.15.29.8.

Charlie Perrin
NMOCD Approved by Signature

1-15-2015
Date KC

OIL CONS. DIV DIST. 3

JAN 08 2015

Form 3160-3
(March 2012)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

SEP 16 201

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NO-G-1001-1767 & NO-G-1001-1768

6. If Indian, Allottee or Tribe Name
Navajo Allotted

1a. Type of work: [X] DRILL [ ] REENTER

7. If Unit or CA Agreement, Name and No.
NMNM-133815

1b. Type of Well: [ ] Oil Well [X] Gas Well [ ] Other [X] Single Zone [ ] Multiple Zone

8. Lease Name and Well No.
Navajo 21-7-25 #4

2. Name of Operator: ***SG INTERESTS I, LTD***
(Agent: Nika Energy Operating, LLC)

9. API Well No.
30-043-21239

3a. Address
P.O Box 2677
Durango, Colorado 81302

3b. Phone No (include area code)
970-259-2701

10. Field and Pool, or Exploratory
Basin Fruitland Coal

4. Location of Well *(Report location clearly and in accordance with any State requirements*)*

At surface **Unit Ltr I (NESE), 1605' FSL & 960' FEL**

At proposed prod. Zone **SAME**

11.Sec., T. R. M. or Blk and Survey or Area
Section 25, T21N, R7W

14. Distance in miles and direction from nearest town or post office *
26 miles from Star Lake Compressor

12. County or Parish
Sandoval

13. State
NM

15. Distance from proposed * location to nearest property or lease line, ft. (Also to nearest drig. Unit line, if any)
1605'

16. No of acres in lease
160.00

17. Spacing Unit dedicated to this well
E/2 / 320 +/- Acres

18. Distance from proposed location * to nearest well, drilling completed, applies for, on this lease, ft.
None

19. Proposed Depth
815'

20. BLM/BIA Bond No. on file
NM 1935

21. Elevations (Show whether DF, KDB, RT, GL, etc)
6756'

22. Approximate date work will start*
Upon Approval

23. Estimated duration
10 days

24. Attachments

The following completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office.)
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above.)
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature: Mike L. Mankin

Name *(Printed Typed)*: **Mike L. Mankin (505.634.6393)**

Date: **Monday, August 25, 2014**

Title:
Authorized Agent for SG Interests I, LTD (505.634.6393)

Approved by *(Signature)*: Mankiewicz

Name *(Printed/Typed)*

Date: 1/8/15

Title: AFM

Office: FFO

Application approval 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.

Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 an 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.

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

DRILLING OPERATIONS AUTHORIZED ARE SUBJECT TO COMPLIANCE WITH ATTACHED "GENERAL REQUIREMENTS"

(Continued on page 2)

(Instructions on page 2)

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

NMOCD

District I
1625 N. French Dr, Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

SEP 16 2014

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-043-21239	71629	Basin Fruitland Coal

4 Property Code	5 Property Name	6 Well Number
314088	NAVAJO 21-7-25	4

7 OGRID No.	8 Operator Name	9 Elevation
20572	SG INTERESTS I, LTD.	6756

10 Surface Location

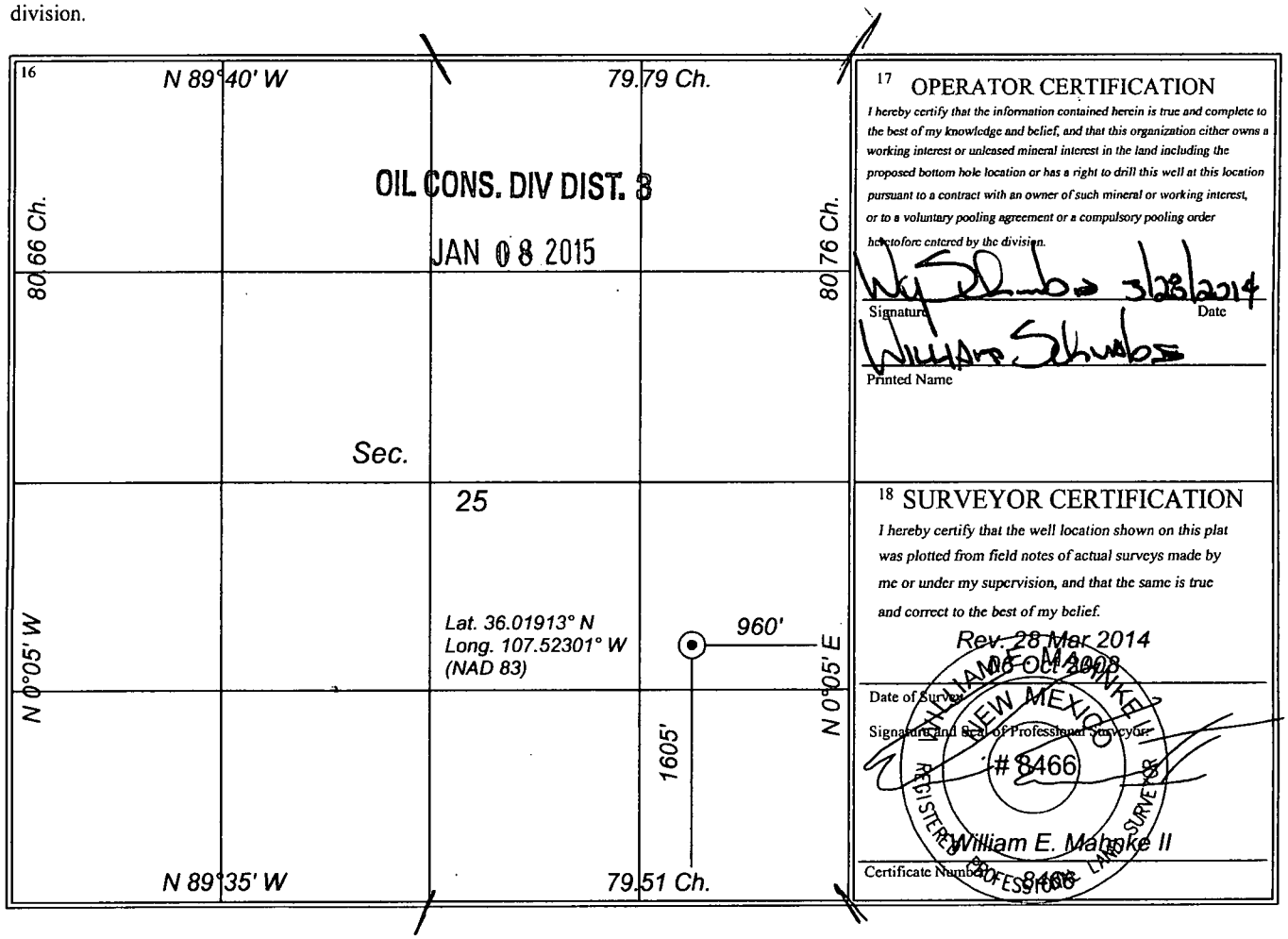
UL or Lot No.	Section	Township	Range	Lot Idn.	Feet from the	North/South Line	Feet from the	East/West Line	County
I	25	21 N	7 W		1605	South	960	East	Sandoval

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

12 Dedicated Acres	13 Joint or Infill	14 Consolidation Code	15 Order No.
E/2 320			

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

Signature — Date: 3/28/2014

William Schwabe

Printed Name

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. 28 Mar 2014
NE MAY 2008
08 Oct 2008

Date of Survey

Signature and Seal of Professional Surveyor:

NEW MEXICO — REGISTERED PROFESSIONAL LAND SURVEYOR — #8466 — William E. Mahnke II

Certificate Number 8466

SG INTERESTS I, INC.
FRUITLAND DRILLING PROGRAM
TS

WELL NAME: Navajo 21-7-25 #4

FIELD NAME: Basin Fruitland Coal

LOCATION: NESE ¼ Section 25, T21N, R7W
1605' FSL, 960' FEL
UL - I
Sandoval County, New Mexico

DATE: July 2014

PROPOSED TD: 815'

DEPTH TO MINERALS: 665'

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 ± 0.1 miles, turn right on dirt road with sign "Star Lake Compressor-26 miles". This is the 0 mile point for this description. Follow dirt road:

4.3 miles – Turn left at "Ojo Encino School" sign,
11.0 miles – Transition to pavement with sign "N 474",
14.5 miles – Turn right off pavement through cattle guard onto dirt road,
20.7 miles – Turn right onto dirt lease road,
21.6 miles – Arrive at "T" intersection, continue north following flagged two-track access road for ±945 feet, turn left off two-track, follow flagged access road north-westerly ±910 feet to location.

DRILLING SKELETON:

Interval	Hole Size	Casing Size	Depth
Surface	12-1/4"	8-5/8"	180'
Production	7-7/8"	4-1/2"	815'

MUD PROGRAM:

Interval	Mud Type	Mud Weight	Funnel Viscosity	Water Loss
0 - 180'	Native	8.5 - 9.1	30 - 50	N/C
180'-815'	Native/LSND	8.5 - 9.1	30 - 50	8 - 10

CORE PROGRAM: None

ELECTRICAL LOGGING PROGRAM: Openhole logs will include a GR/Caliper and a Formation Density log from TD to the surface casing shoe.

CASING AND CEMENTING PROGRAM:

Interval	Size, Wt, Grade, Thread	Depth	Cement
Surface	8-5/8", 24#, J-55, ST&C	180'	128 sx Type 5 2% CaCl, ¼#sx celloflake (includes 100% excess)
Production	4-1/2", 10.5#, J-55, ST&C	TD	243 sx Type 5 ¼#/sx celloflake, 3# Gilsonite (includes 50% excess)

WELLHEAD: 3000# Independent Style

BLOWOUT PREVENTION EQUIPMENT REQUIREMENTS:

Description	Rating
Double Ram Type Preventer	2000 psi
Rotating Head	2000 psi

BOPE testing will be done by third party testers 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 in the driller's log and will include a low pressure test requirement of 250 psig held for 5 minutes and a high pressure test requirement held for 10 minutes. Casing pressure tests must be held for 30 minutes with no more than 10 percent pressure drop during the test.

GEOLOGIC PROGNOSIS:

Elevations: GL ~ 6756', KB ~ 6761'

Formation Tops:

Formation	Depth
Ojo Alamo	Surface
Kirtland	330'
Fruitland	475'
Coal Top	665'
PC	700'
Total Depth	815'

Note: TD will be 150' below the lowest coal. The company man will be on location once coal(s) are penetrated until TD to monitor drilling breaks and to insure that 150' of rathole is drilled. When the hole is logged, if a coal zone is indicated within 150' of bottom, additional hole is to be drilled to provide 150' of rathole.

MUD PROGRAM:

A fresh water native mud (using lime, benex & gel additions) will be used to drill the surface hole. The 7-7/8" hole should be drilled with native mud and a LSND mud as necessary for hole stability just before the top of the Fruitland formation is encountered.

At the top of the Fruitland formation mud weights should be sufficient to control pressures; viscosity should be in the 30 - 50 sec range with a water loss of 8 – 10 cc, as needed.

The Fruitland Coals 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.

CASING AND CEMENTING PROCEDURE:

Note: Notify BLM 24 hours prior to spud and testing of BOP's and cementing. 505-599-8907. **Note the new (June 1, 2005) Federal (BLM) requirements for the testing and test recording of the Blow-out Preventer Equipment.** A copy is attached to the approved APD.

Surface Casing:

1. Drill to a minimum of 185' to accommodate tallied 8 5/8" casing plus 3'. Casing tally to be taken on location.
2. Use a landing joint of 8 5/8" casing to set casing at ground level. Guide shoe on casing should be not more than 2 feet off bottom. Casing head flange to be set at ground level.
3. Displace hole with casing volume of fresh water ahead of cement.
4. Pump Type 5 cement with 2% CaCl at 5-7 barrel per minute.
   Drop plug and displace with fresh water when preflush returns are observed at the surface. Do not over-displace.
6. If plug does not bump, hold pressure for a minimum of three hours.

   a. Wait on cement a minimum of 8 hours or until surface samples are hard *, whichever is longer **before** nippling up the BOP. Pressure test casing and BOP to 1500 psig for 30 minutes. Low pressure test BOP and Casing 250# for 10 minutes.

      1. **Note**: The BLM requirement is a minimum of 250 psi @ 60degrees F compressive strength **before** BOP may be nippled up.

      2. **Notes:** Use a standard 8 5/8" guide shoe, an 8 5/8" insert float, 3 centralizers and 1 stop ring. Set insert on top of first joint. Bakerlok shoe, float collar and bottom two joints of casing.

Production Casing:

1. Roll casing off truck with thread protectors in place.
2. 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.
3. Change out pipe rams to accommodate 4-1/2" casing.
4. Bakerlok 4-1/2" float shoe to bottom of first joint of casing.
5. Bakerlok 4-1/2" differential float collar to top of first joint of casing. Bakerlok second joint of casing into top of float collar. Run "marker joint" 100' above top coal as per openhole logs.
6. Casing should be made up to proper torque (1320 ft-lb for 10.5# or 1540 ft-lb for 11.6#) using an API thread compound.
7. 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).
8. Break circulation at 250 feet and one joint above TD. 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. Kick pumps in slowly to minimize surge pressures.
9. Turbolizing centralizers should be run on each of the first 7 joints. A stop-ring should be used to hold the first centralizer in place. Place the remaining centralizers on collars.
10. 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.
11. Rig up rotational cementing head and return lines. Chixson should be long enough to allow 25'-30' reciprocation.
12. Pump 10 barrels of fresh water. Pump 20 barrel chemical wash. Pump cement slurry. Wash lines.
13. Drop top plug and displace with water. Do <u>not</u> over-displace. Pipe should be rotated at 10-20 RPM or reciprocated at least 20 feet every two to three minutes throughout displacement.
14. 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).
15. Set slips, cut off casing and nipple down BOP. A thread protector or some other appropriate obstruction should be place on the top of the casing stub to prevent loss of material downhole.

Cement Slurry Designs and Notes

Slurry	Cement & Additives	Water Requirements	Weight	Yield
Surface	Type 5 + 1/4#/sx celloflake, and 2% CaCl	5.0 gals/sx	15.8 ppg	1.15 cu. ft/sx

Calculate slurry using estimated volume + 100% excess.

Production	Type 5 + 1/4#/sx celloflake, and 3# gilsonite	5.0 gals/sx	15.8 ppg	1.15 cu. ft/sx

Calculate slurry using caliper volume + 50% excess. Cement volume shown in this prognosis is based on hole and casing size and surface/long string annular volumes plus percentage excess shown above.

Notes:

1. Pump rates should be a minimum of 4 BPM through displacement.
2. Slurry weights should be measured using a mud balance at least every 10 minutes during mixing.
3. At least two samples of the tail should be caught and monitored at room temperature for thickening time.
4. Run Temperature Log if cement does not circulate.

SG Interests I, Ltd.
(Agent: Nika Energy Operating, LLC)
PO Box 2677
Durango, CO 81302
(970) 259-2701

Navajo 21-7-25 #4
NESE (UL, I) Sec 25, T21N-R7W
1605' FSL & 960' FEL
Sandoval County, New Mexico

EIGHT POINT DRILLING PROGRAM

1. Estimated Formation Tops:

Ojo Alamo	Surface
Kirtland	330'
Fruitland	475'
Coal Top	665'
PC	700'
Total Depth	815'

2. Estimated Depth of Anticipated Minerals:

Fruitland (Gas)	*665'*

3. Minimum Specifications for Pressure Control Equipment:

BOP equipment and accessories will meet or exceed BLM requirements outlined in 43 CFR Part 3160.

A 2000 psig double ram hydraulic BOP will be used (see attached diagram). Accessories to the BOP will meet BLM requirements for a 2000 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 and 2" positive chokes, and pressure gauge.

4. Casing and Cementing Program:

Hole Size	Interval	Csg Size	Wt, Grd, Jt
12-1/4"	0-180'	8-5/8"	24.0#, J-55, STC
7-7/8"	0-815'	4-1/2"	10.5#, J-55, STC

Surface Casing will be cemented with 128 sx (147 cu ft) Type 5 w/2% CaCl and 1/4#/sx of celloflake (Yield = 1.15 cuft/sx, Weight = 15.8 #/gal). Cement volumes include 100% excess to circulate cement to surface. A guide shoe, insert float and three (3) centralizers will be used. WOC time is 8 hours. The casing will be pressure tested to 1500 psig.

Production Casing will be cemented with 243 sx (279 cu ft) Type 5 w/ 3# gilsonite and 1/4#/sx celloflake (Yield = 1.15 cuft/sx, Weight = 15.8 #/gal). Cement volume includes 50% excess to circulate cement to surface. In the event cement is not circulated a temperature survey will be run to determine the actual cement top. Cementing equipment will include a guide shoe, float collar and 7 centralizers. Class B or G may be used depending on availability of Type 5.

5. Mud Program:

A native water based mud system (FW) will be used initially followed by a low-solids, non-dispersed gel system (LSND) as needed to condition the hole for logs. Adequate amounts of lost circulation and weighting material will be on location if needed as well as sorbitive agents to handle potential spills of fuel or lubricants.

Depth	Type	Wt (ppg)	Vis (sec)	Wtr loss
0-180'	FW	± 8.5	30-33	NC
180'-TD	FW & LSND	± 8.7-9.1	30-50	8-10 cc

6. Testing, Coring and Logging Program:

No DST's or cores are planned. Openhole logs, if run, will include GR, Induction, Density and Caliper Logs. The GR-Density logs will be run from TD to the top of the Fruitland formation. GR-Induction-Caliper logs will be run from TD to the bottom of the surface casing.

Anticipated Abnormal Pressures and Temperatures:

No abnormal pressures or temperatures are expected in this well. Maximum anticipated Fruitland reservoir pressure is 300 psig with a normal temperature gradient.

7. Operations:

Anticipated spud date is August 2014 or as soon as permits are received and work can be scheduled. Estimated drilling time is 4 - 5 days. The Fruitland will be completed as a cased hole completion, perforated and hydraulically fracture stimulated. Completion operations are expected to take 5 - 7 days and will commence as soon after completion of drilling operations and scheduling allow.

Topsoil will be stockpiled separate from subsoil with a noticeable gap left between the stockpiles. Vehicle / equipment traffic will be prevented from crossing topsoil stockpiles.

If the location becomes prone to wind or water erosion, SG will take appropriate measures to prevent topsoil loss. Such measures may include using tackifiers or water to wet the topsoil stockpile, essentially creating a crust on the exposed soil to prevent loss.

c. All construction materials for the well pad will consist of native borrow and subsoil accumulated during construction. If additional fill or surfacing material is required, it will be obtained from existing permitted or private sources and will be hauled in by trucks over existing access roads to the area.

Construction of the well pad will require a maximum cut of 4.5 feet on the eastern side and a maximum fill of 4.9 feet on the western side.

d. Well pad construction equipment may include chain saws, a brush hog, scraper, maintainer, excavator, and dozer. Construction of the well pad will take approximately 2 weeks.

3. Pipeline

a. SG will file the appropriate application for authorization to construct, operate, maintain, and terminate buried, well connect pipeline(s) that will be submitted to the BIA and/or BLM.

b. Construction of the well-tie pipeline(s) will consist of digging a trench with excavation equipment such as a wheel-ditcher or backhoe, laying pipe, and back filling the trench.

G. <u>Methods for Handling Waste Disposal:</u>

1. Drilling Fluids and Dry Cuttings

a. Drilling fluids and dry cuttings will be stored onsite in above-ground storage tanks. Upon termination of drilling operations, the drilling fluids will be recycled and transferred to other permitted locations or returned to the vendor for re-use, as practical. Residual fluids and dry cuttings will be removed from the storage tanks and disposed of at Basin Disposal, Inc. and/or Industrial Ecosystem, Inc. waste disposal facilities.

Access Description for Navajo 21-7-25 #4

From Counselor Trading Post on U.S. Hwy. 550, travel south on U.S. 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.

4.3 miles- Turn left at "Ojo Encino School" sign,
11.0 miles- Transition to pavement with sign "N 474",
14.5 miles- Turn right off pavement through cattle guard onto dirt road,
20.7 miles- Turn right onto lease road,
21.6 miles- Arrive at "T" intersection, continue north following flagged two-track access road for ±945 feet,
Turn left off two-track, follow flagged access road northwesterly ±910 feet to location.

2-M SYSTEM