

CHECK SHEET

Date May 20, 1992

Company KeeSun Corp.

Well Name Hochsprung 6-18

County Toole Field Old Shelby

Location 1650 FNL/1338 FWL (NWSNW) Sec. 18 Twp. 33N Rge. 1W

Permit Number N 12415

API Number 101-23534

Drilling Fee \$25.00

Intention To Drill 5-20-92

Permit Expiration Date 11-21-92

Proposed Depth/Formation 1,300' Swift DU         

\$ 5,000 One Well Bond          Completion Date 5/29/92

\$10,000 Blanket Bond          TD 1383' PBTB         

\$20,000 Blanket Bond          IP / Formation Gas Well

Well Type Federal          State          Fee X

Samples NONE Received         

Geological/Well Report         

Sundry Notices         

Sub. Report of Abandonment         

Electric Logs LD-GR 8/24/92

Miscellaneous Operation + Gas Well History 12/24/92

PLAINTIFFS' EXHIBIT  
**P268**

NW SENW

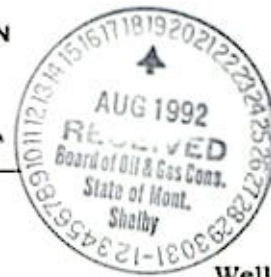
LOCATE WELL CORRECTLY

Form No. 4 R 4-85


(SUBMIT IN TRIPLICATE)  
TO  
BOARD OF OIL AND GAS CONSERVATION  
OF THE STATE OF MONTANA  
BILLINGS OR SHELBY

ARM 36.22.307  
ARM 36.22.1011  
ARM 36.22.1013

### COMPLETION REPORT



Company KeeSun Corp. Lease Hochsprung Well No. #6-18

Address P.O. Box 430 Cut Bank, MT. 59427 Field (or Area) Old Shelby

The well is located 1650 ft. from (N) line and 1338 ft. from (W) line of Sec. 18

Sec. 18; T. 33N; R. 1W; County Toole; Elevation 3392' G.L.

Commenced drilling May 27, 1992; Completed May 29, 1992

Write the API# or the well name of another well on this lease if one exists \_\_\_\_\_

The information given herewith is a complete and correct record of the well. The summary on this page is for the condition of the well at the above date.

Completed as gas well Signed M. John Finstad  
(oil well, gas well, dry hole)

API# 25-101-23534 Title Petroleum Engineer

Date August 10, 1992

#### IMPORTANT ZONES OF POROSITY

(denote oil by O, gas by G, water by W; state formation if known)

From 794 to 810 G From \_\_\_\_\_ to \_\_\_\_\_  
 From 1196 to 1202 G From \_\_\_\_\_ to \_\_\_\_\_  
 From \_\_\_\_\_ to \_\_\_\_\_ From \_\_\_\_\_ to \_\_\_\_\_  
 From \_\_\_\_\_ to \_\_\_\_\_ From \_\_\_\_\_ to \_\_\_\_\_

#### CASING RECORD

Size Casing	Weight Per Ft.	Grade	Thread	Casing Set	From	To	Sack of Cement	Cut and Pulled from
7"	20#	J-55	8rnd	Surface	0	399'	70sx	
4 1/2"	9.5#	J-55	8rnd	Production	0	1210'	E.C.P. +10 sx, G	

#### TUBING RECORD

Size Tubing	Weight Per Ft.	Grade	Thread	Amount	Perforations
2 3/8"	4.7#	used	8rnd	1333'	none

#### COMPLETION RECORD

Rotary tools were used from Surface to T.D.

Cable tools were used from \_\_\_\_\_ to \_\_\_\_\_

Total depth 1383 ft.; Plugged back to -- T.D.; Open hole from 1383 to 1210

PERFORATIONS			ACIDIZED, SHOT, SAND FRACED, CEMENTED			
Interval		Number and Size and Type	Interval		Amount of Material Used	Pressure
From	To		From	To		
None			None			

(If P&A show plugs above)

#### INITIAL PRODUCTION

Well is producing from Bow Island/Sunburst (pool) formation.

I.P. \_\_\_\_\_ barrels of oil per \_\_\_\_\_ hours (pumping or flowing)

200 Mcf of gas per 24 hours.

\_\_\_\_\_ barrels of water per \_\_\_\_\_ hours, or \_\_\_\_\_ % W.C.

Initial 10-day average production \_\_\_\_\_ (bbl./day) (if taken)  
 Pressures (if measured): Tubing \_\_\_\_\_ psi flowing; \_\_\_\_\_ psi shut-in  
 Casing \_\_\_\_\_ psi flowing; \_\_\_\_\_ psi shut-in  
 Gravity \_\_\_\_\_ ° API (corrected to 60° F.)

Formation Volume Factor \_\_\_\_\_ Porosity \_\_\_\_\_ % Average Connate water \_\_\_\_\_ %

Type of trap \_\_\_\_\_

Producing mechanism \_\_\_\_\_

**DRILL STEM TESTS**

D.S.T. No.	From	To	Tool Open (Min.)	Shut-in	F.P.	S.I.P.	Recovery	Cushion
	None							

**CORES**

No.	Interval	Recovered
	None	

**LOG RUNS**

Type	From	To
Litho-Density/G.R.	1383	0

**FORMATION RECORD**  
(ELECTRIC LOG TOPS)

From	To	FORMATION	Top of Formation
		Blackleaf	---
		Base Fish Scales	198
		Bow Island	280
		Dakota	794
		Kootenai	816
		Sunburst Zone	1148
		Sunburst Sand	1196
		Morrison	1223
		Swift	1245
		Swift Shale	1334
		Rierdon	1383

(Use additional sheets where needed to complete description)

Submit in quadruplicate to:  
**Montana Board of Oil and Gas Conservation**  
Billings or Shelby



<b>Application for Permit</b>			<b>Lease Name</b> Hochsprung
<b>To:</b> Drill <input checked="" type="checkbox"/> Deepen <input type="checkbox"/> Re-enter <input type="checkbox"/>			<b>Lease Type (Private, State, Federal)</b> Private
<b>Operator:</b> KeeSun Corp. <b>Address:</b> P.O. Box 430 <b>City:</b> Cut Bank <b>State:</b> MT. <b>ZIP:</b> 59427 <b>Telephone Number:</b> (406) 873-2203			<b>Well Number</b> KeeSun #6-18 Hochsprung
<b>Location of Well (quarter-quarter section and footage measurements)</b> 1650' fml - 1320' fwl <b>NWSENE</b> <b>1338 FJ1</b> (if directionally drilled, show both surface and bottom hole locations above)			<b>Unit Agreement Name</b> N/A
<b>Proposed total depth</b> 1300'	<b>Formation at total depth</b> Swift	<b>Elevation (indicate GL or KB)</b> 3392 GL	<b>Field Name or Wildcat</b> Old Shelby
<b>Size and description of drilling/spacing unit</b> 320 West 1/2		<b>API number of another well on this lease (if any)</b>	<b>Objective Formation(s)</b> Bow Island/Sunburst/Dakota
			<b>Section, Township, and Range</b> Sec.18, T33N, R1W
			<b>County</b> Toole
			<b>Anticipated spud date</b> May 1992

Hole size	Casing size	Weight/foot	Grade (API)	Depth	Sacks of Cement	Type of Cement
9 7/8"	7"	17#	L.S.	430'	130 sx. Class G + 3% CaCl2	
6 1/4"	4 1/2"	9.5#	J-55	1300'	E.C.P. or 50 sx. Class G	

**Describe Proposed Operations:**

Describe or attach labeled diagram of blowout preventer equipment. Describe mud program or indicate if air drilled.

- 1) Drill 9 7/8" surface hole to 430' K.B.
- 2) Run 7", 17# casing to 430' K.B., cement w/ 130' sx. Class G + 3% CaCl2
- 3) Drill 6 1/4" main hole to 1300' K.B. with Air
- 4) If well is productive an ECP will be run or the well will be cemented.
- 5) If well is a dry hole, the well will be plugged and abandoned in accordance with the rules of the Board of Oil and Gas for the State of Montana.

Signed (Agent) M. John Fenstad Title Petroleum Engineer Date May 15, 1992

Permit Fee \$2500

Check Number 150

Permit Expires 11-20-92

Permit Number A12415

API Number  
25-101-23534

**Notice**  
Filing of all logs, reports, analyses, and surveys made or run is required.

**Samples Required**  
NONE   
ALL  From \_\_\_\_\_ To \_\_\_\_\_  
Core chips to address below, full cores to USGS, Core Laboratory, Arvada, CO.  
Dry, washed cut delivered prepaid to:  
**BOARD OF OIL AND GAS CONSERVATION**  
2535 St. Johns Avenue  
Billings, MT 59102

Approved MAY 20 1992  
By Steve V. Sanki Date \_\_\_\_\_  
Title Field Supervisor

**Conditions of Approval**  
Order 15-88, 12-87  
Gas only

Supplementary Information

Note: Information or attachments in addition to this supplement may be required by Rule or by special request.

- 1 Please attach a topographic or equivalent map of the area showing: the well location, access route from county or other established roads, nearest fresh water streams, lakes ponds, springs, etc.
- 2 If there are any water wells within 1/2 mile of the location, please label water wells on the map and indicate approximate depth if available, or give location and depth below.

Location(s): None Depth: \_\_\_\_\_

- 3 Please attach a sketch of the well site showing approximate dimensions and orientation of the site, size and location of pits, topsoil stockpile, and estimated cut /fill at the corners and centerstake, (Note: sketch may be hand drawn and need not be done by an engineer or surveyor).

- 4 Will the reserve pit be lined ?

Yes

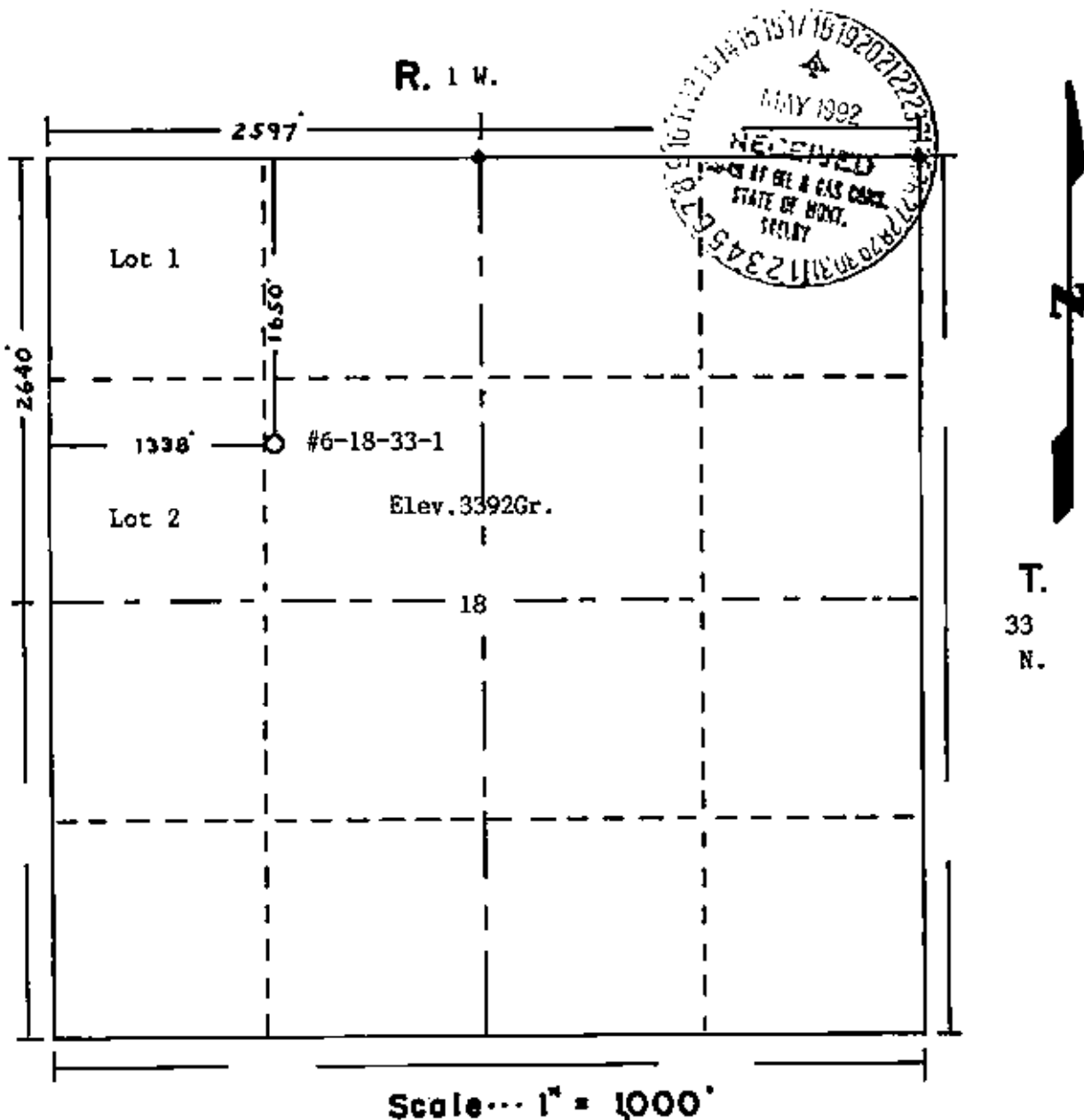
Please describe lining/sealing material and thickness.

No

Please explain below or attach separate report.  
Well will be air drilled

- 5 Does construction of the access road or location, or some other aspect of the drilling operation require additional state or federal permits? Please indicate below:

- No additional permits needed
- Stream crossing permit (apply through county Conservation District)
- Air quality permit (may be required if drilling time exceeds 90 days and total engine horsepower exceeds 1500hp)
- Water use permit
- Federal drilling permit
- Other state or federal permit: (specify)



Dorres T. White & Associates of Billings, Montana has in accordance with a request from Rhodes for Keesun Corporation determined the location of #6-18-33-1 Hochsprung to be 1650' FN-1338' FW Section 18 Township 33 N. Range 1 W., Montana Principal Meridian Toole County, Montana

I hereby certify that this plat is an accurate representation of a correct survey showing the location of

#6-18-33-1 Hochsprung

Date: 5/15/92

*Dorres T. White*  
 Licensed Land Surveyor No. 585ES  
 State of Montana

MINERALS MGMT. SERVICE  
RECEIVED

FEB 24

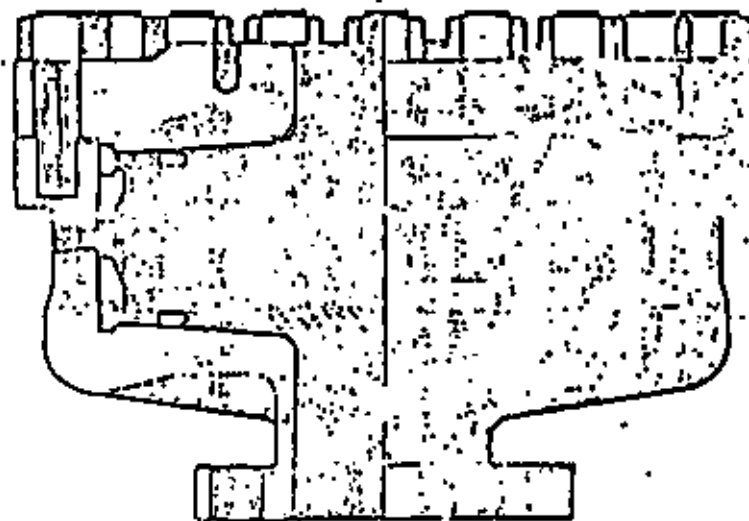
BILLINGS, MONTANA

## REGAN BLOWOUT PREVENTERS

The Regan Torus Blowout Preventer is used primarily on production and workover rigs for well control up to 3000 PSI working pressure.

## DESIGN FEATURES

- The Torus Preventer is designed for minimum height to facilitate its use with production and workover rigs.
- The rubber packer will conform to any object in the well bore. Sealing ability is not affected by minor damage to the inner bore.
- The packer will seal on open hole at full working pressure.
- The dual packer design increases the reliability of the preventer since the outer rubber is never exposed to the well bore. Under ordinary service, the outer packer is rarely replaced.

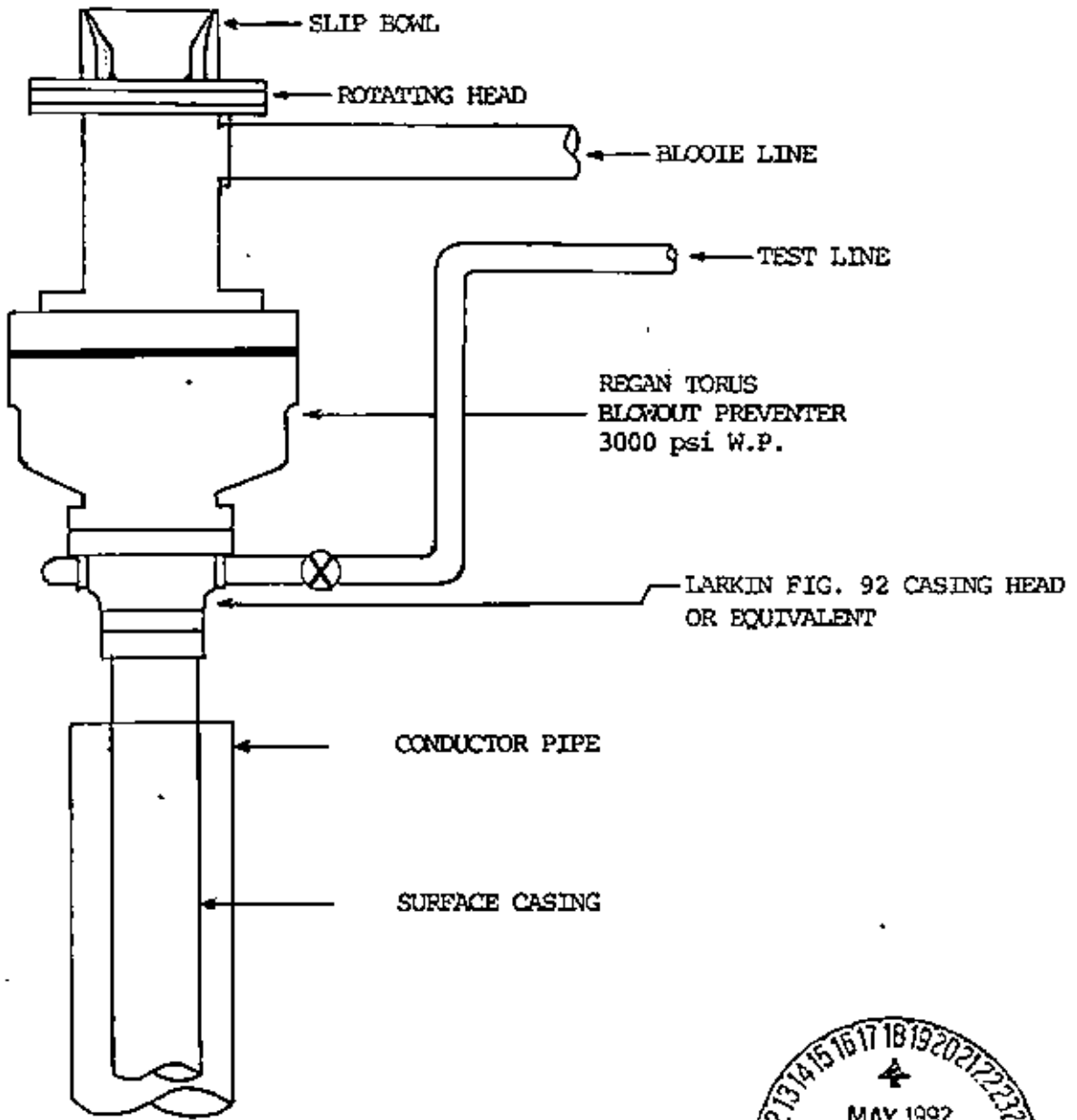
TORUS BLOWOUT PREVENTER  
PATENTED

## SPECIFICATIONS

Nominal Size	Test Pressure (psi)	DIMENSIONS (in.)			Weight (lb.)	End Flanges (S)	R/OX Ring Grooves	Side Outlet	(1) Bottom flange holes elongated for use with either 7000 or 2025 psi API-60 flange. (Any can be used with obsolete 300, 400 API flange.) Top flange normally slotted for 3000 psi API-60 flange unless otherwise specified.
		Outside Diameter	Thru Bore	Overall Height					
6	3000 1000	27 28 1/2	7 1/2 7 1/2	23 1/2 21 1/2	1360 1250	Nom. 6 Nom. 6	45 45	None 2" L.P.	
8	3000 1500	34 1/2 35 1/2	8 8	25 25 1/2	2625 2150	Nom. 8 Nom. 8	49 49	None 2" L.P.	



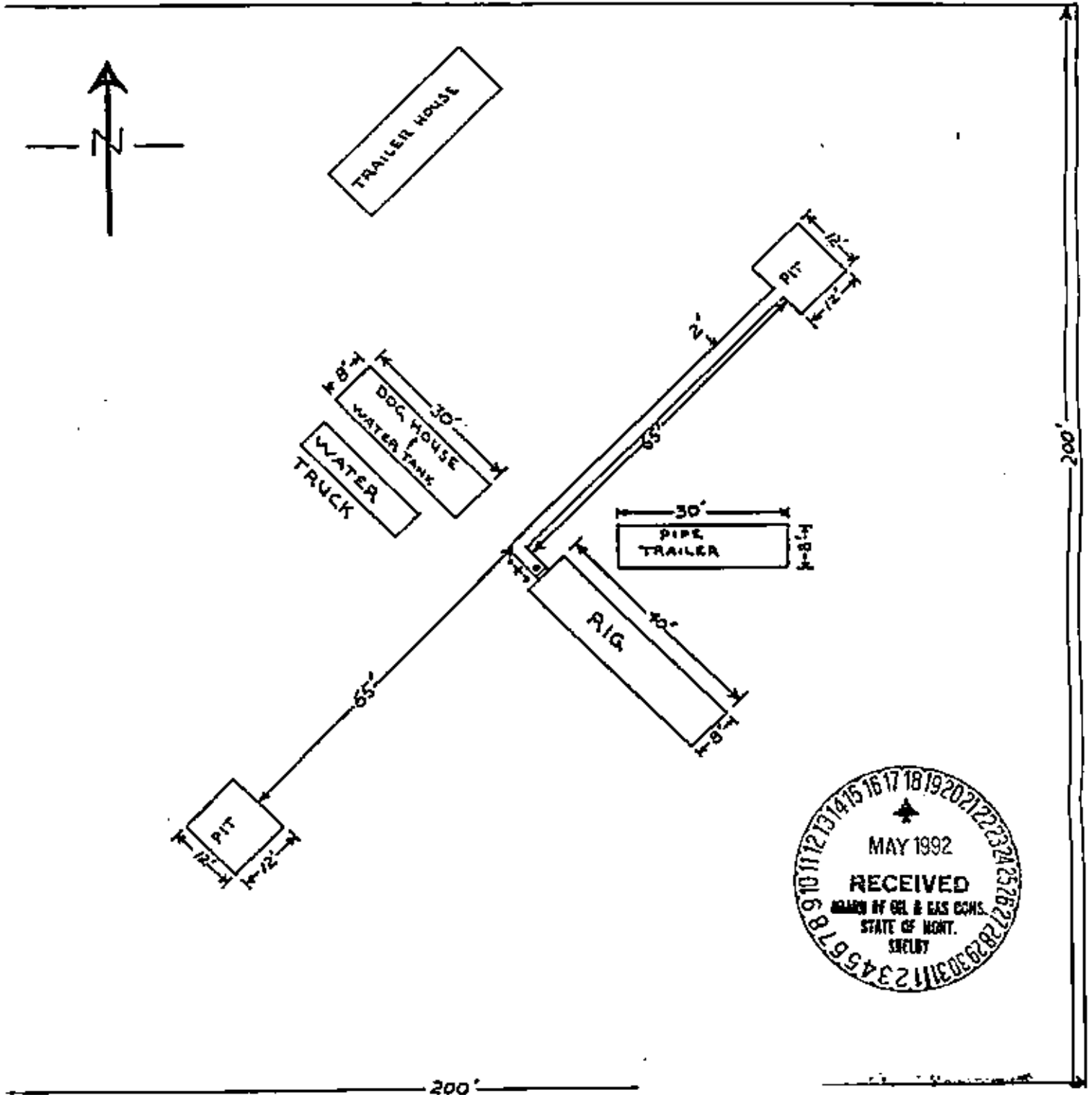
ROTARY, AIR AND MIST DRILLING RIG





A&G DRILLING COMPANY

AIR DRILLING RIG LOCATION DIAGRAM



SCALE: 1" = 25'

No cut or fill required



SHELBY QUADRANGLE  
MONTANA-TOOLE CO.  
7.5 MINUTE SERIES (TOPOGRAPH)

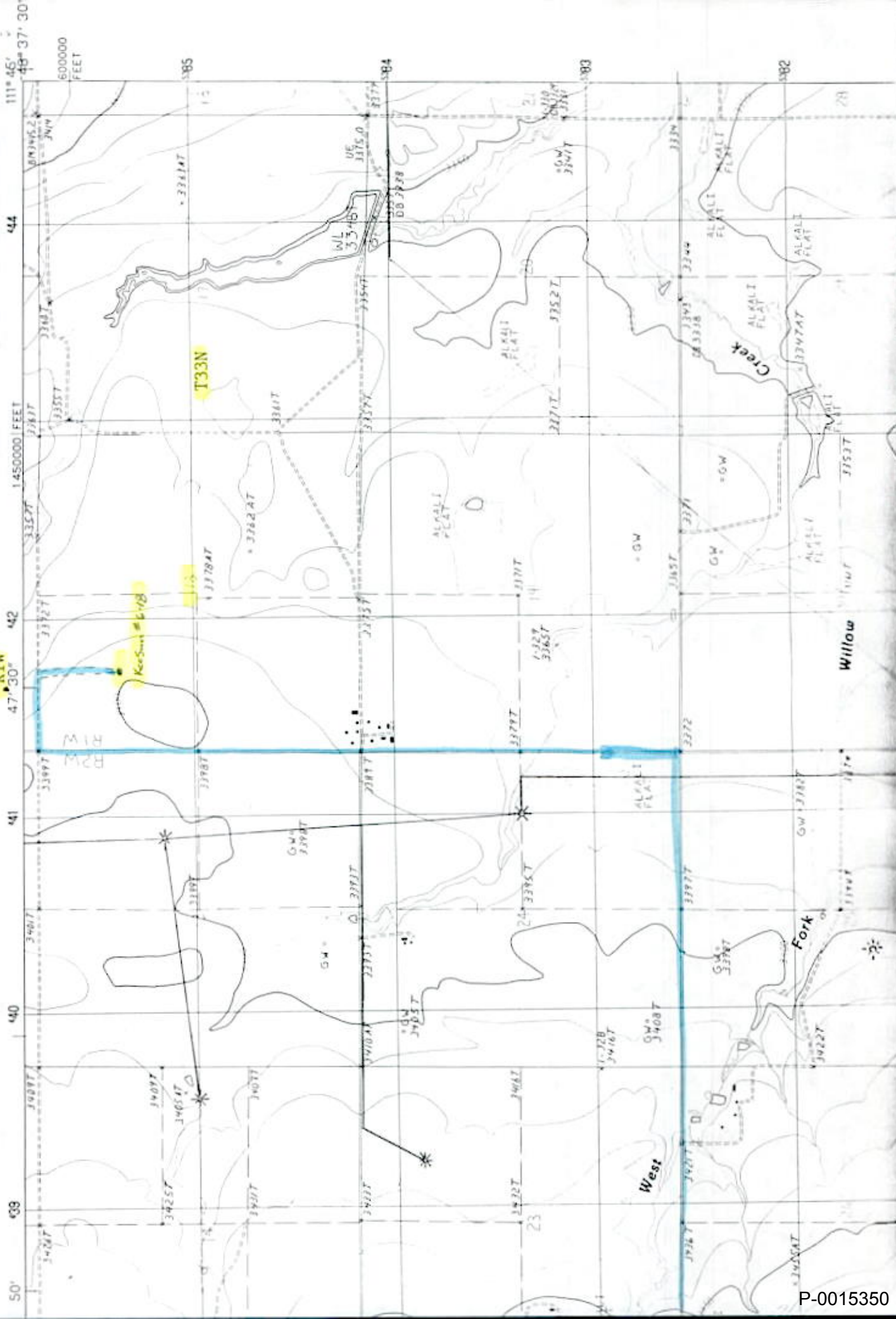


FIGURE 49  
ENVIRONMENTAL CHECKLIST FOR OIL AND GAS WELLS

Montana Board of Oil and Gas Conservation  
Environmental Assessment

Operator: Kee Sun Corp.  
Well Name/Number: Hochgarden G-18  
Location: NWSE 1/4 Section 18 T33N R10  
County: \_\_\_\_\_, MT; Field (or Wildcat): \_\_\_\_\_

Air Quality

(possible concerns)

Long drilling time No 2-3 days  
Unusually deep drilling (high horsepower rig) No 70,000  
Possible H<sub>2</sub>S gas production None  
In/near Class I air quality area No  
Air quality permit for flaring/venting (if productive) No

Mitigation:

- Air quality permit (AQB review)
- Gas plants/pipelines available for sour gas
- Special equipment/procedures requirements
- Other: \_\_\_\_\_

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Water Quality

(possible concerns)

Salt/oil based mud Air drilled and/or freshwater mud drilled  
High water table No  
Surface drainage leads to live water No  
Water well contamination None in area  
Porous/permeable soils No tight clay soils  
Class I stream drainage No none in area

Mitigation:

- Lined reserve pit
- Adequate surface casing
- Berms/dykes, re-routed drainage
- Closed mud system
- Off-site disposal of solids/liquids (in approved facility)
- Other: \_\_\_\_\_

Comments: 430' of 7" casing cemented to surface more than adequate surface casing.

Figure 49 (continued)

Soils/Vegetation/Land Use

(possible concerns)

Stream crossings None  
High erosion potential No  
Loss of soil productivity Slight (cultivated wheat field)  
Unusually large wellsite No  
Damage to improvements No  
Conflict with existing land use/values Slight

Mitigation

- Avoid improvements (topographic tolerance)
- Exception location requested
- Stockpile topsoil
- Stream Crossing Permit (other agency review)
- Reclaim unused part of wellsite if productive
- Special construction methods to enhance reclamation
- Other

Comments: Mitigate surface damages with surface cover. (Walt Dms)

Health Hazards/Noise

(possible concerns)

Proximity to public facilities/residences 1/2 mile to South residence  
Possibility of H2S None  
Size of rig/length of drilling time Small/short

Mitigation:

- Proper BOP equipment
- Topographic sound barriers
- H2S contingency and/or evacuation plan
- Special equipment/procedures requirements
- Other:

Comments: Hydr BOP OK

Wildlife/recreation

(possible concerns)

Proximity to sensitive wildlife areas (DFWP identified) None identified  
Proximity to recreation sites None  
Creation of new access to wildlife habitat No  
Conflict with game range/refuge management No  
Threatened or endangered Species None

Mitigation:

- Avoidance (topographic tolerance/exception)
- Other agency review (DFWP, federal agencies, DSL)
- Screening/fencing of pits, drillsite
- Other:

Comments: Cultivated wheat field

Figure 49 (continued)

Historical/Cultural/Paleontological

(possible concerns)

Proximity to known sites

Mitigation

avoidance (topographic tolerance, location exception)

other agency review (SHPO, DSL, federal agencies)

Other:

Comments: Cultivated wheat field

Social/Economic

(possible concerns)

Substantial effect on tax base

Create demand for new governmental services

Population increase or relocation

Comments:

Existing gas field (old shale by)

Remarks or Special Concerns for this site

Summary: Evaluation of Impacts and Cumulative effects

No significant impacts

I conclude that the approval of the subject Notice of Intent to Drill (does/does not) constitute a major action of state government significantly affecting the quality of the human environment, and (does/does not) require the preparation of an environmental impact statement.

Prepared by: Steve Smith (title): Field Supervisor Date: 5-10-92

Other Persons Contacted:

(Name and Agency)

(subject discussed)

(date)

(Name and Agency)

(subject discussed)

(date)

If location was inspected before permit approval:

Inspection date: 5-10-92 Inspector: Susaki

Others present during inspection: No others present

OPERATIONAL SUMMARY  
AND  
GEOLOGICAL WELL HISTORY



KeeSun Corp.  
Hochsprung No. 6-18  
NW SE NW Section 18-T33N-R1W  
(1650'fml - 1338'fml)  
Toole County, Montana

API No. 25-101-23534

TEAGUE GEOLOGICAL, INC.  
147 MAIN STREET  
SHELBY, MONTANA 59474  
GEOLOGIST: KNEELON E. TEAGUE

25-101-23534

RESUME

Spud Date: May 27, 1992  
Completion Date: May 29, 1992  
Status: Dual Completed Gas Well  
(Bow Island, 103 mcf/d, SID 22 psi)  
(Sunburst/Swift, 273 mcf/d, SID 80 psi)  
Elevation: 3392 gr 3395 KB  
Total Depth: 1384' driller 1383' logger  
Casing: 10 3/4" @ 22' KBM (Conductor Pipe not cemented)  
7 @ 399' KBM w/70 sx  
4 1/2" @ 1210' KBM w/ECP + 10 sx  
Contractor: A & G Drilling Inc., Rig No. 4  
Type Rig: Ingersol Rand RD 10  
Air Compressor: Ingersol Rand (1050 cu.ft./min - 350 psi)  
Air Program: Surface to Total Depth (See "Air Drilling Summary")  
Hole Size: 9 7/8"(0-22'), 8 3/4"(22'-405'), 6 1/4"(405'-1384')  
Size Drill Pipe: 4 1/2" Ingersol Rand Flush Joint (18.50 #/ft.)  
Drill Collars: None - Pull down rig  
Sample Intervals: 30'(Surface to Total Depth)  
Sample Quality: Fair (air samples)  
Cores: None  
Drill Stem Tests: None  
Gas Tests: See "Gas Tests" section

AIR DRILLING SUMMARY

Surface Hole: 9 7/8" hole drilled to 22': Top bedded shale at 10'; hole wet at 22': Drove 10 3/4" conductor casing to 22': Drilled 8 3/4" hole with Air/Mist/Foam from 22' to 405': No gas observed while drilling

Main Hole: 6 1/4" hole was drilled from under surface casing(405') to total depth(1384') with air(dusting). No moisture of any kind was observed. First gas observed on connection at 480'. Gas tests were run at 513'(34 mcf/d), 873'(112 mcf/d), 1180'(108 mcf/d), 1236'(219 mcf/d), and 1384'(336 mcf/d)

SAMPLE DISPOSITION

Samples not required by State or Federal Regulatory Agencies. Samples were left at the drill site, and not permanently saved.

LOGGING PROGRAM

Ran Schlumberger Litho-Density Log with Gamma Ray and Caliper from 10' to 1380'.

DRILLING FLUID ADDITIVES (Surface Hole)

Can Am Air Foam      6 gals

BIT RECORD

<u>No.</u>	<u>Size</u>	<u>Make</u>	<u>Type</u>	<u>Interval</u>	<u>Footage</u>	<u>Hours</u>	<u>Jet Size</u>	<u>Serial No.</u>
S1	9 7/8	STC	F2	0-22	22	1/4	open	rerun
S2	8 3/4	STC	F2	22-405	383	6 3/4	open	rerun
1	6 1/4	Sec	S84F	405-1384	979	11 1/2	open	rerun

ELECTRICAL LOG FORMATION TOPS

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
<u>Cretaceous</u>		
Blackleaf		
Base Fish Scales	198	+3197
Bow Island	280	+3115
Dakota	794	+2601
Kootenai	816	+2579
Sunburst Zone	1148	+2247
Sunburst Sand	1196	+2199
<u>Jurassic</u>		
Morrison (Yellow Shale)	1223	+2172
Swift	1245	+2150
Swift Shale	1334	+2061
Rierdon	1352	+2043
<u>Total Depth</u>	1383	+2012

GAS TESTS

Note: First gas noted on connection at 480'

No.            1  
Depth        513'  
Formation    Bow Island  
Test Time    30 minutes

<u>Performance</u>	<u>Time</u>	<u>Orifice</u>	<u>Backpressure (PSI)</u>	<u>Approx. Rate (mcf/d)</u>	<u>Comments</u>
	5 min	1/4"	11	32.4	sweet/dry
	10 min	1/4"	12	34.0	sweet/dry
	20 min	1/4"	12	34.0	sweet/dry
	30 min	1/4"	12	34.0	sweet/dry

Comments      Gas appears sweet and dry. Apparently stabilized at rate of 34 mcf/d. No Shut In Pressure was taken.



No. 2  
 Depth 873'  
 Formation Kootenai (Bow Island & Dakota open)  
 Test Time 30 minutes

Performance	Time	Orifice	Backpressure(PSI)	Approx. Rate(mcf/d)	Comments
	5 min	1/2"	9	108	sweet/dry
	10 min	1/2"	9	108	sweet/dry
	20 min	1/2"	9.5	112	sweet/dry
	30 min	1/2"	9.5	112	sweet/dry

Comments Gas sweet and dry. Bow Island sands and Dakota section open. Test was run to determine total gas rate prior to penetrating Kootenai. No Shut In Pressure was taken.

No. 3  
 Depth 1180'  
 Formation Kootenai (above Sunburst Sand)  
 Test Time 30 minutes

Performance	Time	Orifice	Backpressure(PSI)	Approx. Rate(mcf/d)	Comments
	5 min	1/2"	9	108	sweet/dry
	10 min	1/2"	9	108	sweet/dry
	20 min	1/2"	9	108	sweet/dry
	30 min	1/2"	9	108	sweet/dry

Comments No additional gas in Kootenai formation. Gas is sweet and dry.

No. 4  
 Depth 1236'  
 Formation Yellow Shale (Sunburst open)  
 Test Times 30 minutes

Performance	Time	Orifice	Backpressure(PSI)	Approx. Rate(mcf/d)	Comments
	5 min	3/4"	7.0	211	sweet/dry
	10 min	3/4"	7.25	215	sweet/dry
	20 min	3/4"	7.5	219	sweet/dry
	30 min	3/4"	7.5	219	sweet/dry

Comments Approximately 110 mcf increase over previous test. Gas is sweet and dry. No Shut In Pressure was taken.

No. 5  
 Depth 1384' (Total Depth)  
 Formation Rierdon (everything in hole open)  
 Test Time 30 minutes

Performance	Time	Orifice	Backpressure(PSI)	Approx. Rate(mcf/d)	Comments
	5 min	1"	5.5	336	sweet/dry
	10 min	1"	5.5	336	sweet/dry
	20 min	1"	5.5	336	sweet/dry
	30 min	1"	5.5	336	sweet/dry

Comments Approximately 117 mcf increase over previous test. Gas is sweet and dry. Entire hole from 399' to 1384' is open. No Shut In Pressure was taken.

#### COMPLETION TESTS

No. C1  
Interval 1206' to 1383' (open hole below 4 1/2" casing)  
Formation Sunburst/Swift  
Test Time 60 minutes  
Shut In Pressure 80 psi at surface

Performance	Time	Orifice	Backpressure(PSI)	Approx Rate(mcf/d)	Comments
	Initially	3/4"	10	259	sweet/dry
	10 min	3/4"	12	288	sweet/dry
	20 min	3/4"	11	274	sweet/dry
	30 min	3/4"	11	274	sweet/dry
	45 min	3/4"	11	274	sweet/dry
	60 min	3/4"	11	274	sweet/dry

Comments Shut In Pressure taken after well shut in for approximately 56 hours. Shut In Pressure (80 psig) taken at surface. Blew well down. Tested well on 2 3/8" EUE tubing. Pressure on annulus steady 20 psig at surface throughout test. No moisture observed.

No. C2  
Interval 399' to 1096' (annulus between 4 1/2" casing & 6 1/4" hole)  
Formation Bow Islands & Dakota  
Test Time 60 minutes  
Shut In Pressure 22 psi at surface

Performance	Time	Orifice	Backpressure(PSI)	Approx Rate(mcf/d)	Comments
	5 min	1/2"	10	116	sweet/dry
	15 min	1/2"	9 1/2	112	sweet/dry
	25 min	1/2"	9 1/2	112	sweet/dry
	35 min	1/2"	8 1/4	103	sweet/dry
	45 min	1/2"	8 1/4	103	sweet/dry
	60 min	1/2"	8 1/4	103	sweet/dry

Comments Shut In Pressure taken after well shut in for approximately 56 hours. Shut In Pressure (22 psi) taken at surface. Blew well down. Tested well on casing head valve (backside). No moisture was observed.

DAILY ACTIVITY SUMMARY (Calendar Days)

May 27, 1992 Rigged up: Spud 9 7/8" hole at 7:00 a.m.: Drilled 9 7/8" hole to 22': Drove 20.50' of 10 3/4" Conductor casing to 22'KB: Drilled 9 3/4" hole with Air/Foam/Mist from 22' to 405': T.D. 405' at 4:45 p.m.: Conditioned hole for casing: Ran 13 joints(393.36') used 7", 20 #/ft., 8rt, ST&C, casing set at 399'KBH with 70 sacks Class 'G' cement, 3% calcium chloride: Plug down at 8:15 p.m.: Good cement returns(3 bbls) to surface: W.O.C.

May 28, 1992 W.O.C.: Nipped up: Drilled plug with mist; drilled out at 4:15 a.m.: Dried hole for air drilling: Began drilling main hole at 5:00 a.m.: Drilled 6 1/4" hole with air(dusting) from 405' to 1384': Reached T.D. 1384' at 5:45 p.m.: Ran Gas Tests No. 1, 2, 3, & 4, while drilling in sequence: Ran Gas Test No. 5 at total depth: Wait on parts: Started out of hole for logs at 9:00 p.m.: Ran Schlumberger Logs: Running 4 1/2" casing

May 29, 1992 T.D. 1384': Ran 37 joints(1198.96') 4 1/2", 9.5 #/ft., ST&C, 8rt, M50, Range 2 casing set at 1210.26'KBH with Baker/Lynes External Casing Packer set at 1206'KB: Packer successfully inflated at 2:00 a.m.: Pumped 10 ex Class 'G' cement, 3% calcium chloride down backside on top of packer: Picked up used 3 7/8" bit welded on collar, and tripped in hole with 43 joints used 2 3/8" EUE, 4.7 # Range 2 tubing: Periodically drying hole tripping in: On bottom(bull plugged shoe) 1212' @ 6:15 a.m.: Dried hole: Drilled shoe: Landed tubing: Well completed: Moved off rig

May 30, 1992 Location idle

May 31, 1992 Ran completion tests: Checked Shut In Pressures(well shut in approximately 56 joints) 80 psi on tubing and 4 1/2" casing(Sunburst/Swift), 22 psi on casing head annulus(Bow Islands/Dakota). Blew well down: Installed 2" orifice well prover: Ran 60 minute test on tubing(11 psi on 3/4" orifice, 274 mcf/d) and 7" casing(8 1/4 psi on 1/2" orifice, 103 mcf/d): Sunburst/Swift completed at an initial rate of 274 mcf/d, sweet and dry gas, with a Shut In Pressure at the surface of 80 psig. Bow Island/Dakota completed at an initial rate of 103 mcf/d, sweet and dry gas, with a Shut In Pressure of 22 psig at the surface: Reports ends

LITHOLOGY

Sample descriptions begin at the surface. Sample descriptions are not corrected for drill time lag. Formation tops were determined from samples, penetration rate, and electrical logs. Samples were examined and described wet. Samples are air samples.

Samples Caught at 30' Intervals

0 - 10 Clay, tan, brown, oxidized, sandy, soft, gummy, much loose coarse sand and igneous debris, calcareous in part, dense

10' - Top Bedded Shale

10 - 30 Shale, dk. gray to black, blocky, platy, firm, earthy to gritty textured, calcareous, occasional amber calcified inclusions, dense trace lt. gray to white gummy bentonite: Hole wet at 20', drove 10 3/4" Conductor casing to 22'KBH

- 30 - 60 Shale, dk. gray, chunky, firm to soft, earthy textured, rarely micromicaceous, generally noncalcareous, trace gray silt laminations, dense
- 60 - 90 Shale, dk. gray to black, chunky, firm to soft, earthy textured, micromicaceous, noncalcareous, dense
- 90 - 120 Sandstone, lt. gray, very fine to fine grained, quartzose, many black and gray chert grains, micaceous, poorly sorted, well cemented to friable, firm, sharp, noncalcareous, dense; Much shale as above
- 120 - 50 Siltstone, gray, firm, sharp, micaceous, very finely sandy in part, noncalcareous, shaly and dirty, some laminations of dk. gray micaceous shale
- 150 - 80 Siltstone, very finely sandy, firm, dense, shaly as above: Some dk. gray to black shale, chunky, blocky, earthy, dense, trace lt. gray to white soft soapy bentonite

198' - E log Base Fish Scales

- 180 - 210 Shale, dk. gray to black, chunky, soft, earthy textured, some very fine pyrite inclusions, noncalcareous, dense: Trace soft white soapy bentonite: Trace siltstone as above
- 210 - 40 Siltstone, gray, very shaly, micromicaceous, very slightly calcareous, dense: Much earthy shale as above: Trace sharp dk. brown concretion fragments
- 240 - 70 Shale, dk. gray to black, chunky, blocky, fairly soft, earthy textured, noncalcareous, dense

280' - E log top Bow Island

- 270 - 300 Shale, dk. gray to black, very silty and sandy, firm, grades to dense poorly developed shale sandstone in part, sharp, noncalcareous
- 300 - 30 Shale, dk. gray to black, blocky, firm, earthy textured but silty and gritty in part, noncalcareous, dense: Trace sandstone, lt. gray, fine grained, black chert and mica specks, poorly sorted, firm, sharp, shaly, noncalcareous, dense
- 330 - 60 Sandstone, gray, lt. gray, very fine grained to siltstone, shaly and dirty, black chert and mica specks, rare pale green grains, poorly sorted, well cemented, noncalcareous, dense: Much shale as before
- 360 - 90 Shale, dk. gray brown to black, chunky, blocky, soft, smooth to waxy textured, occasional bright orange specks(zeolites?), noncalcareous, bentonitic, dense: Some tan to white soft soapy bentonite
- 390 - 405 Shale, gray brown, gray, lt. gray, some black, chunky, soft, bentonitic, smooth to waxy textured, noncalcareous, occasional bright orange specks(zeolites?), dense: Some lt. gray to tan soft waxy bentonite

405' - Ran and Cemented 7" Casing to 399'KBH

Note: Samples from 405' to T.D. are dust

- 405 - 20 Sandstone, lt. gray, very fine grained, unconsolidated, quartzose, many black and gray chert grains, much soft gummy lt. gray bentonitic matrix material, well sorted, noncalcareous, no apparent show

- 420 - 50 Shale, dk. gray to black, chunky, blocky, soft, earthy textured, slightly gritty in part, noncalcareous, dense
- 450 - 80 Sandstone, dk. gray, shaly, very fine and fine grained, quartzose scattered black and gray chert grains, many lt. green grains, poorly sorted, well cemented, noncalcareous, sharp, brittle, dense: Trace gas on connection at 480'
- 480 - 510 Sandstone, lt. gray, fine grained, quartzose, unconsolidated, many black chert grains, scattered pink, amber, and pale green grains, fairly well sorted, noncalcareous, traces of lt. gray clay matrix material: Gas test at 513' gauged 34 mcf/d
- 510 - 40 Shale, dk. gray to black, chunky, soft, earthy textured, bentonitic in part, noncalcareous, dense
- 540 - 70 Sandstone, lt. gray, fine grained, quartzose, many black chert grains, many lt. green grains, occasional amber grains, well sorted, probable bentonitic matrix, noncalcareous, questionable porosity
- 570 - 600 Shale, dk. gray, blocky, platy, firm, earthy textured to silty and gritty in part, noncalcareous, dense
- 600 - 30 Sandstone, lt. gray, very fine grained, quartzose, many black, green, and occasional amber grains, well sorted, generally unconsolidated, some gray shaly matrix material, probably dense, noncalcareous
- 630 - 60 Sandstone, gray, dk. gray, very shaly and poorly developed, very fine grained, quartzose, sparsely glauconitic, some black chert and mica specks, firm, sharp, noncalcareous, dense
- 660 - 90 Shale, dk. gray, blocky, earthy to gritty textured, soft, noncalcareous, dense
- 690 - 720 Shale as above becoming very sandy and glauconitic: Considerable fine unconsolidated quartz sand
- 720 - 50 Shale, dk. gray, silty and sandy as above, has general speckled appearance
- 750 - 80 Shale as above
- 794' - E log top Dakota
- 780 - 810 Shale, dk. gray, chunky, blocky, platy, earthy to very finely gritty in part, noncalcareous, dense
- 816' - E log top Kootenai
- 810 - 40 Shale, green, blocky, firm, very silty and sandy, has speckled appearance in part, noncalcareous, dense
- 840 - 70 Shale, green, blocky, smooth to waxy textured, silty and sandy in part, noncalcareous, dense: Gas test at 873' gauged 112 mcf/d
- 870 - 900 Siltstone, dk. gray green, firm, sharp, brittle, unconsolidated in part, shaly, firm, sharp, noncalcareous, dense
- 900 - 30 Shale, dk. green, chunky, firm to soft, smooth to subwaxy textured, noncalcareous, dense
- 930 - 60 Shale, dk. reddish brown, some maroon, chunky, soft, earthy and mudstone textured, noncalcareous, dense

- 960 - 90 Shale, dk. greenish gray, chunky, soft, smooth textured, bentonitic, noncalcareous, dense
- 990 - 1020 Shale, dk. greenish gray, as above
- 1020 - 50 Sandstone, gray, greenish cast, very fine grained to siltstone, quartzose, very shaly and dirty, noncalcareous, unconsolidated in part, dense
- 1050 - 80 Siltstone, cream, lt. gray, very fine grained to siltstone, quartzose, unconsolidated, scattered black, gray, and amber grains, noncalcareous, dense
- 1080 - 1110 Sandstone, lt. gray, pale greenish cast, very fine grained to siltstone, quartzose, generally unconsolidated, scattered black, tan, and amber grains, rare orange grains, fair sorting, well cemented and calcareous in part, dense
- 1110 - 40 Sandstone, lt. gray, fine grained, quartzose, many black and tan accessory grains, fair sorting, well cemented to unconsolidated firm, sharp, noncalcareous, probably dense
- 1148' - E log top Sunburst Zone
- 1140 - 70 Shale, pale greenish gray, soft, waxy textured, metabentonitic, noncalcareous, dense: Much soft white gummy bentonite
- 1196' - E log top Sunburst Sand
- 1170 - 1200 Sandstone, cream to lt. gray, fine to medium grained, quartzose, many angular white, tan, and amber chert grains, trace fine pyrite, very poorly sorted, unconsolidated, noncalcareous, some lt. gray to white soft waxy bentonite, gas test at 1180' gauged 108 mcf/d, no increase in gas from before
- 1223' - E log top Morrison (Yellow)
- 1200 - 30 Shale, bright mustard yellow, soft, earthy and mudstone textured, noncalcareous, dense: Gas test at 1236' gauged 219 mcf/d
- 1245' - E log top Swift
- 1230 - 60 Sandstone, lt. gray, brownish cast, very fine grained to siltstone, quartzose, many black chert grains, occasional glauconite grains, fairly well sorted, well cemented, noncalcareous, thinly laminated and interbedded with dk. gray brown silt and micaceous shale: Trace loose fine pyrite
- 1260 - 90 Siltstone, gray brown, very shaly, firm, interlaminated and ribboned with dk. gray brown silty shale, firm, sharp, noncalcareous, dense
- 1290 - 1320 Sandstone, dk. gray, fine grained, quartzose, unconsolidated, 40% black chert grains, fair sorting, no apparent matrix material, appears noncalcareous
- 1334' - E log top Swift Shale
- 1320 - 50 Shale, black, platy, firm, blocky in part, smooth to earthy textured, generally noncalcareous but very slightly calcareous in part, dense
- 1352' - E log top Rierdon
- 1350 - 84 Marlstone, dove gray, firm, highly calcareous, grades to dense subcrystalline marly limestone in part, very dense

1384' - Total Depth by Driller  
 1383' - Total Depth by Logger



**KNEELON E. TEAGUE**

PROFESSIONAL OIL FIELD SERVICES

**PIPE TALLY**

DATE May 28/29, 1992 PAGE NO. 1 OF 1  
 WELL NAME Hochsprung 6-18 LOCATION NW SE NW Sec 18-T33N-R1W  
 OPERATOR KeeSun Corp. RIG A & G Drilling Inc., Rig No. 4  
 PIPE DESCRIPTION: 3600 SIZE 4 1/2" WT 9.5 LB/FT GRADE M50 RANGE 2  
 CPCL ST&C THREAD 8rt MFG Maverick NEW OR USED used

TYPE OF STRING Production TALLIED BY Owens/Teague (THOS OFF)

NO	FOOTAGE		NO	FOOTAGE		NO	FOOTAGE		NO	FOOTAGE		NO	FOOTAGE	
	FEET	TENTHS		FEET	TENTHS		FEET	TENTHS		FEET	TENTHS		FEET	TENTHS
1	17	34	31	32	10	41			61			81		
2	32	93	32	32	99	42			62			82		
3	32	48	23	32	88	43			63			83		
4	33	04	24	32	88	44			64			84		
5	33	18	25	33	08	45			65			85		
6	31	37	26	33	02	46			66			86		
7	32	86	27	33	09	47			67			87		
8	33	02	28	30	79	48			68			88		
9	33	13	29	32	90	49			69			89		
10	33	97	30	32	89	50			70			90		
TOTAL 1-10	312	43	TOTAL 21-30	326	62	TOTAL 41-50			TOTAL 61-70			TOTAL 81-90		
11	33	21	31	32	88	51			71			91		
12	33	07	32	31	51	52			72			92		
13	32	62	33	33	04	53			73			93	20	87
14	33	14	34	33	06	54			74			94	33	02
15	32	96	35	33	07	55			75			95	33	11
16	32	68	36	33	13	56			76			96	33	03
17	32	67	37	32	99	57			77			97	33	09
18	33	39	38			58			78			98	32	88
19	33	32	39			59			79			99	32	91
20	33	17	40			60			80			100	33	07
TOTAL 11-20	330	23	TOTAL 31-40	229	68	TOTAL 51-60			TOTAL 71-80			TOTAL 91-100	251	98

TOTAL 1-20	642.66	TOTAL 21-40	556.30	TOTAL 41-60		TOTAL 61-80		TOTAL 81-100	
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TOTAL 1-20	642	66	GRAND TOTALS 1-100			REMARKS <u>Ran 37 jts(1198.96') set at 1210' KBM w/Lynes ECP set at 1206KB Pumped 10 sx Class G cement, 3% CaCl<sub>2</sub> on top of packer</u> TOTAL JOINTS ON LOCATION <u>45(1450.94)</u> AGENT OF OPERATOR: <u>K. Teague</u>
TOTAL 21-40	556	30	GRAND TOTALS 101-100			
TOTAL 41-60			GRAND TOTALS 101-100			
TOTAL 61-80			GRAND TOTALS 1-37	1198	96	
TOTAL 81-100			GRAND TOTALS 1-100	1198	96	
GRAND TOTAL 1-100	1198	96	GRAND TOTALS 1-100	1198	96	

101-23534





# JOB SUMMARY

HALLIBURTON DIVISION  
HALLIBURTON LOCATION

HAUYE  
HAUYE

BASED ON TICKET NO. 12413

CUSTOMER: Acetylene  
WELL NO: 18  
JOB TYPE: 5-20-92  
DATE: 5-20-92

### WELL DATA

FIELD: \_\_\_\_\_ SEC. 18 TWP. 31N RING 14W COUNTY Texas STATE TX

FORMATION NAME	TYPE	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING		<u>IV</u>		<u>4E</u>	<u>16</u>	<u>1206</u>	
LINER							
TUBING							
OPEN HOLE							SHOTS/FT
PERFORATIONS							
PERFORATIONS							
PERFORATIONS							

FORMATION THICKNESS FROM \_\_\_\_\_ TO \_\_\_\_\_

INITIAL PROD OR \_\_\_\_\_ BPD WATER \_\_\_\_\_ BPD GAS \_\_\_\_\_ MCFD

PRESENT PROD OR \_\_\_\_\_ BPD WATER \_\_\_\_\_ BPD GAS \_\_\_\_\_ MCFD

COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_

PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_

BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_

MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

### JOB DATA

#### TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE		
CENTRALIZERS		
BOTTOM PLUG		
TOP PLUG		
HEAD		
PACKER		
OTHER		

CALLER OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE: <u>5-20</u>	DATE: <u>5-20</u>	DATE: <u>5-20</u>	DATE: <u>5-20</u>
TIME: <u>2:30</u>	TIME: <u>1:00</u>	TIME: <u>1:2</u>	TIME: <u>2:15</u>

### PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>11 F. ISS</u>	<u>3740</u>	<u>HAUYE</u>
<u>KEVIN KENNEDY</u>		<u>11</u>

#### MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LBS/GAL @ \_\_\_\_\_

DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LBS/GAL @ \_\_\_\_\_

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ %

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ %

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ %

SURFACTANT TYPE \_\_\_\_\_ GAL \_\_\_\_\_ IN

HE AGENT TYPE \_\_\_\_\_ GAL \_\_\_\_\_ IN

FLUID LOSS ADD TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN

GELLING AGENT TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN

FRIC. RED. AGENT TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN

BREAKER TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN

BLOCKING AGENT TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_

PERFRAC BALLS TYPE \_\_\_\_\_ QTY \_\_\_\_\_

OTHER 200 lbs. PVC

OTHER \_\_\_\_\_

DEPARTMENT: 113

DESCRIPTION OF JOB: 5-20 casing

JOB DONE THRU: TUBING  CASING  ANNULUS  TIE/ANN.

CUSTOMER REPRESENTATIVE: X Mr. John F. [Signature]

HALLIBURTON OPERATOR: [Signature] COPIES REQUESTED \_\_\_\_\_

### CEMENT DATA

STAGE	NUMBER OF BAGS	CEMENT	BRAND	BULK SACHED	ADDITIVES	YIELD CU FT/BK	MIXED LBS/GAL
	<u>10</u>	<u>200</u>			<u>2-10-11</u>	<u>1.13</u>	<u>158</u>

### PRESSURES IN PSI

### SUMMARY

### VOLUMES

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_ PRESSURE: BDL-GAL \_\_\_\_\_ TYPE \_\_\_\_\_

BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_ LOAD & BRDN: BDL-GAL \_\_\_\_\_ PAD: BDL-GAL \_\_\_\_\_

AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_ TREATMENT: BDL-GAL \_\_\_\_\_ DEPT: BDL-GAL 1

SHUT-IN INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 10-MIN \_\_\_\_\_ CEMENT SLURRY: BDL-GAL 2

ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_ TOTAL VOLUME: BDL-GAL \_\_\_\_\_

AVERAGE RATES IN BPM \_\_\_\_\_

TREATING \_\_\_\_\_ DISPL. \_\_\_\_\_ OVERALL \_\_\_\_\_ REMARKS: See Tool Log

FEET \_\_\_\_\_ REASON \_\_\_\_\_



# JOB SUMMARY

HALLIBURTON DIVISION  
HALLIBURTON LOCATION

DEWITT  
Haver

BILLED ON TICKET NO. 184142

### WELL DATA

FIELD \_\_\_\_\_ SEC 18 TWP 33 RANG 100 COUNTY Tulsa STATE OK

FORMATION NAME \_\_\_\_\_ TYPE \_\_\_\_\_

FORMATION THICKNESS \_\_\_\_\_ FROM \_\_\_\_\_ TO \_\_\_\_\_

INITIAL PROD. OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD \_\_\_\_\_

PRESENT PROD. OIL \_\_\_\_\_ BPD. WATER \_\_\_\_\_ BPD. GAS \_\_\_\_\_ MCFD \_\_\_\_\_

COMPLETION DATE \_\_\_\_\_ MUD TYPE \_\_\_\_\_ MUD WT. \_\_\_\_\_

PACKER TYPE \_\_\_\_\_ SET AT \_\_\_\_\_

BOTTOM HOLE TEMP. \_\_\_\_\_ PRESSURE \_\_\_\_\_

MISC. DATA \_\_\_\_\_ TOTAL DEPTH \_\_\_\_\_

	NEW USED	WEIGHT	SIZE	FROM	TO	MAXIMUM PSI ALLOWABLE
CASING	14	20	7	R11	400	
LINER						
TUBING						
OPEN HOLE						SHOT/FT.
PERFORATIONS						
PERFORATIONS						
PERFORATIONS						

### JOB DATA

CALLER OUT	ON LOCATION	JOB STARTED	JOB COMPLETED
DATE <u>5-27</u>	DATE <u>5-27</u>	DATE <u>5-27</u>	DATE <u>5-27</u>
TIME _____	TIME _____	TIME _____	TIME _____

### PERSONNEL AND SERVICE UNITS

NAME	UNIT NO. & TYPE	LOCATION
<u>D. Foss</u>	<u>3740</u>	<u>Haver</u>
<u>K. R. ...</u>	<u>11992</u>	

### TOOLS AND ACCESSORIES

TYPE AND SIZE	QTY.	MAKE
FLOAT COLLAR		
FLOAT SHOE		
GUIDE SHOE		
CENTRALIZERS		
BOTTOM PLUG		
TOP PLUG	<u>1</u>	
HEAD		
PACER		
OTHER		

### MATERIALS

TREAT. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL-API \_\_\_\_\_

DISPL. FLUID \_\_\_\_\_ DENSITY \_\_\_\_\_ LB/GAL-API \_\_\_\_\_

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB \_\_\_\_\_

PROP. TYPE \_\_\_\_\_ SIZE \_\_\_\_\_ LB \_\_\_\_\_

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ % \_\_\_\_\_

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ % \_\_\_\_\_

ACID TYPE \_\_\_\_\_ GAL \_\_\_\_\_ % \_\_\_\_\_

SURFACTANT TYPE \_\_\_\_\_ GAL \_\_\_\_\_ IN \_\_\_\_\_

HE AGENT TYPE \_\_\_\_\_ GAL \_\_\_\_\_ IN \_\_\_\_\_

FLUID LOSS ADD. TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN \_\_\_\_\_

GELLING AGENT TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN \_\_\_\_\_

PRC. RED. AGENT TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN \_\_\_\_\_

BREAKER TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_ IN \_\_\_\_\_

BLOCKING AGENT TYPE \_\_\_\_\_ GAL-LB \_\_\_\_\_

PERFAC BALLS TYPE \_\_\_\_\_ QTY \_\_\_\_\_

OTHER \_\_\_\_\_

OTHER \_\_\_\_\_

DEPARTMENT Cont

DESCRIPTION OF JOB Unit 4 sand plug

JOB DONE THRU: TUBING  CASING  ANNULUS  TEGJANAL

CUSTOMER REPRESENTATIVE X [Signature]

HALLIBURTON OPERATOR [Signature] COPIES REQUIRED \_\_\_\_\_

### CEMENT DATA

STAGE	NUMBER OF SACKS	CEMENT	BRAND	BULK SACKED	ADDITIVES	YIELD CU. FT./50K	MIXED LBS./GAL
	<u>25</u>	<u>112-112</u>			<u>250 25</u>	<u>113</u>	<u>130</u>

### PRESSURES IN PSI

### SUMMARY

### VOLUMES

CIRCULATING \_\_\_\_\_ DISPLACEMENT \_\_\_\_\_

BREAKDOWN \_\_\_\_\_ MAXIMUM \_\_\_\_\_

AVERAGE \_\_\_\_\_ FRACTURE GRADIENT \_\_\_\_\_

SHUT-IN INSTANT \_\_\_\_\_ 5-MIN \_\_\_\_\_ 15-MIN \_\_\_\_\_

ORDERED \_\_\_\_\_ AVAILABLE \_\_\_\_\_ USED \_\_\_\_\_

TREATING \_\_\_\_\_ DIAM. \_\_\_\_\_ OVERALL \_\_\_\_\_

FEET 49 REASON After joint

PRESLUSH BBL-GAL \_\_\_\_\_ TYPE \_\_\_\_\_

LOAD & BKDN BBL-GAL \_\_\_\_\_ PAD BBL-GAL \_\_\_\_\_

TREATMENT BBL-GAL 20 1/2 DISPL BBL-GAL 14

CEMENT SLURRY BBL-GAL 141

TOTAL VOLUME BBL-GAL \_\_\_\_\_

REMARKS See 10/18/60

Phones: (406) 873-4211  
 (406) 873-2628  
 Mobile: (406) 873-5102  
 Fax: (406) 873-5550

# MONTANA OIL WELL CEMENTERS, INC.

Established in 1942  
 P. O. Box 1227 Cut Bank, Montana 59427-1227

13607

## WORK ORDER & INVOICE BEFORE WORK IS COMMENCED THIS ORDER MUST BE SIGNED.

District CUT BANK Date 5/28/92 Order No. \_\_\_\_\_ Reg. No. \_\_\_\_\_  
 Company KEESUN Corp  
 Contractor A+G Drilling  
 Lease and Well No. KEESUN RTA 6-10 Hochsprung Job Started 11:00 AM Job Completed 1:30 PM  
 Country and State Toole Mont Field old Shelby Section 10 Twp 33 N Range 1 W  
 Mail Invoice To KEESUN  
 Address \_\_\_\_\_

Type of Well:  Workover,  Exploratory,  Development,  Other   
 Type of Job: Surf.  Inter.  Prod.  Squeeze  Pumping  P & A   
 P. B.  Other (Write In) \_\_\_\_\_  
 Casing: New  Used  Size 4 1/2 Weight 9.5 Depth 1202 Type \_\_\_\_\_  
 Hole Data: Bore Size: 6 1/4 Total Depth 1383 Rotary  Cable Tool  Air   
 Tubing Or Drill Pipe: Size \_\_\_\_\_ Type \_\_\_\_\_ Weight \_\_\_\_\_ Depth \_\_\_\_\_  
 Cementing Packer: Size \_\_\_\_\_ Type \_\_\_\_\_ Weight \_\_\_\_\_  
 Type Float Equipment: 4 1/2 RTS FCP



P & A Data: \_\_\_\_\_ No. Sacks \_\_\_\_\_  
 Plug No. 1 - From \_\_\_\_\_ To \_\_\_\_\_ Plug No. 5 - From \_\_\_\_\_  
 Plug No. 2 - From \_\_\_\_\_ To \_\_\_\_\_ Plug No. 6 - From \_\_\_\_\_  
 Plug No. 3 - From \_\_\_\_\_ To \_\_\_\_\_ Plug No. 7 - From \_\_\_\_\_  
 Plug No. 4 - From \_\_\_\_\_ To \_\_\_\_\_ Plug No. 8 - From \_\_\_\_\_ To \_\_\_\_\_  
 Others \_\_\_\_\_

Cement Data: Bulk  Sacked  Mixed Wt. Per Gal \_\_\_\_\_ Sacks 10 Type 1 + 2 Brand Portland

Plugs & Heads: Top Plug \_\_\_\_\_ Type \_\_\_\_\_; Bottom Plug \_\_\_\_\_ Type \_\_\_\_\_; Type Head Swedge

Pressure: Circulating \_\_\_\_\_ Minimum \_\_\_\_\_ Maximum \_\_\_\_\_

Displacement Data: Displaced with \_\_\_\_\_ cu. ft. Barrels Plug back at \_\_\_\_\_

Remarks: Supervise Running FCP Packer and Pressure up to 1600 psi. Displace with 19.5 BBLs of Water